



FRIDAY, DECEMBER 1.

Contributions.

Forty-nine Miles an Hour from Providence to Stonington.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In your recent articles on fast trains in this country I find no mention of the fast express over the New York, Providence & Boston road, which was running all through the past summer and was recently taken off for the winter. The regular schedule time of this train was 61 minutes for the trip from Providence to Stonington, a distance of 50 miles. It will be seen that this time is considerably better than the 43 miles in 57 minutes of the Boston & Providence Railroad.

-PROVIDENCE, Nov. 25th, 1882.

Statistics and Clerical Force.

ST. LOUIS, Nov. 18, 1882.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Mr. Fay says in *Gazette* of Nov. 10, and very truly, that master mechanics of his acquaintance are generally unable to furnish statistics. He omits, however, to state that they are generally deprived of the clerical force necessary to produce statistics by the superintendent or manager of their road. Ten years ago I went as clerk into the machinery department of a road operating over 550 miles of line. A clerk, time-keeper and store-clerk constituted our force, and our duties embraced the correspondence, accounting, pay-rolls, distribution of wages, oil, waste fuel, repairs, making a performance sheet and doing all the thousand and one little things which, collectively, take so much time. Many days in the month we worked sixteen hours, and, as the Auditor insisted on having the pay-rolls on the morning of the fourth of the ensuing month, some one not infrequently worked all night of the third to attain that end; and yet the Superintendent complained of the expense. He is now General Manager of a very important road, and always shows a low cost of operation per mile. Others are more liberal, I know, but I do not think the master mechanics are altogether to blame for the lack of statistical information as to locomotive performance—certainly they are not, if deprived of the means of gaining and recording such information.

AUDITOR.

The Education of Engineers.

JACKSON, Tenn., Nov. 23, 1882.

TO THE EDITOR OF THE RAILROAD GAZETTE:

On reading your editorial in issue of Nov. 10, on "The Education of Engineers," several things suggested themselves to me, and on reading the communication of Mr. Harris and that from "Civil Engineer," I was still further encouraged to give you my ideas on the subject, and let them go for what they may be worth.

As to the term "civil engineer," that of course originated in contradistinction to "military engineer," i. e., one who devotes himself to the problem of attack and defense and other duties in warfare. When you take into consideration this origin, I for one do not think the term a misnomer. Again, as to the varied duties involved in the profession, I say, a civil engineer is never finished in his education; he always has something more to learn; but from the time he is able to take charge of any work usually given to the profession to overlook, I can see no harm in his calling himself a civil engineer. As to the education of the engineer, I perfectly agree with one who has done more for such an education, in my opinion, than any other person now living, Mr. Trautwine, I mean, when he says he believes it is happy for the profession that many of them are not good mathematicians. I think there is nothing more of a bore in the profession than "the proud, conceited, talking spark," who has just graduated, coming into a corps (the term you sneer at), and boasting of his education, and acting as if the latter had been finished; they generally find their level after a time; I know I did for one, and also discovered that college does not teach everything.

I think the great trouble in the education of the engineer of the present day is that there is no college that teaches especially and only what is necessary to make a good and successful engineer. The relations between the asymptotes of a hyperbola may be interesting to know if one has time, also future series and the differential and the integral calculus, but they are not of service to the engineer in his everyday life, and I believe it is waste of time for him to attempt to master them.

I thoroughly agree with Mr. Harris in the opportunities of an engineer to acquire a knowledge of all branches of the profession in a lifetime if he choose to, and until that be ended I maintain his education is not finished. A civil engineer is perfectly right in his assertion that many leading engineers have had a liberal education. I know several myself who are highly polished and learned, but they will all coincide with me in backing up the assertion that an elaborate education is not necessary to success in the profession. I, myself, think the best class of civil engineers are born, not made. I think also the profession naturally suggests itself. I would always recommend it to those of an ingenious and practical turn of mind, those quick in an emergency

and inclined to be mechanical, preferring the work shop to base-ball or other games. I have watched these and never found them to fail in the profession.

STILL A LEARNER.

Some Facts in the Early History of the Pennsylvania Railroad—Development of Track and Road-Bed.

TO THE EDITOR OF THE RAILROAD GAZETTE:

The early history of the Pennsylvania Railroad has been so much written about, one needs a special license for speaking of those facts necessary to a proper beginning of our subject. Aside from a popular book and the large volume of Mr. Dredge are the important "Notes on the Internal Improvements of Pennsylvania," and the interesting paper read before the Pennsylvania Historical Society entitled "The First Railroad over the Allegheny Mountains," and in addition to these, portions of the article on "Transportation in Pennsylvania," published in vol. I. of "Pennsylvania and the Centennial Exhibition." The most interesting of all documents in connection with the subject, however, is "The Report made to the Pennsylvania Society for the Encouragement of Internal Improvement, by William Strickland, Architect and Engineer"; who was sent abroad in 1825, to examine the public works of Great Britain. The volume, published in 1826, contains drawings of various road-beds, rail-sections, frogs, etc., besides a cut of Stephenson's locomotive. If reproduced some of its pages would, perhaps, give the best representation for this country of the starting point of railroad apparatus.

The Early Tracks.—The early road-bed began at the intersection of Broad and Vine streets, Philadelphia; it was graded 25 ft. wide, and its track was laid on various sections by different methods. Six miles were laid with granite sills, plated with iron bars $2\frac{1}{2}$ in. in width by $\frac{3}{4}$ in. in thickness; 18 miles with wooden string pieces similarly plated; two miles with stone blocks and edge rail having stone sills extending across the track at intervals of 15 ft.; and 137 miles with stone blocks and edge rail having wooden cross ties intermediate except on some of the embankments, where the edge rails were secured to cross-ties supported on longitudinal mud-sills. The granite sills soon proved a failure, and all the flat rails were found to curl on end; sometimes even to cut into the floor of the car.

Chronological Table of the Government Roads of Pennsylvania.

1822-3. The Legislature of Pennsylvania incorporates a company to construct a railroad from Philadelphia to Columbia known as the Pennsylvania Railroad.

1828 (March 24). "An act relative to the Pennsylvania Canal and to provide for the commencement of a railroad" was approved.

1832. Single track opened from Philadelphia to Columbia (82 miles), but little business attempted, as a second track is thought to be a necessity.

1834. Ten planes and road between Holidaysburg and Johnstown and through route by canal to Pittsburgh opened.

1835. The first locomotive runs between Philadelphia and Columbia. The Lancaster & Harrisburg Railroad (36 miles) is built by a corporation in which the State holds considerable interest.

1837 (Oct. 7). Double track opened to Columbia.

Chronology of Pennsylvania Railroad.

1846. Incorporated (April 13); charter issued Feb. 25.

1847. Officers: President, Samuel V. Merrick; Chief Engineer, J. Edgar Thomson; Assistants, Wm. B. Foster and Edward Miller.

1850. Road opened to Portage Railroad at Duncansville, near Holidaysburg (Sept. 17). Thomas A. Scott, station agent at Duncansville.

1852. First train runs through from Philadelphia to Pittsburgh over Portage Railroad.

1854. First train through the Allegheny tunnel above Altoona (Jan. 21). Road opens for business between Lancaster and Pittsburgh (Feb. 15).

1857. The State Works purchased by the Pennsylvania Railroad Company, the Lancaster road having been previously leased.

1862 (Jan. 6). Philadelphia & Erie Railroad leased.

1868 (March). The Pan-Handle Railway Company, the Holidays Cove Railroad Company and the Steubenville & Indiana Railroad Company enter into an agreement of consolidation under the style Pittsburgh, Cincinnati & St. Louis Railway Company.

1869 (June 7). Pittsburgh, Fort Wayne & Chicago Railway leased.

1871. United Railroads of New Jersey leased.

1872. Letters patent issued to Pennsylvania Company, chartered by act of Legislature of Pennsylvania (approved April 7, 1870).

1873. Jeffersonville, Madison & Indianapolis Railroad leased.

1875. Northern Central Railroad controlled.

1881. Philadelphia, Wilmington & Baltimore Railroad controlled by purchase of stock.

THE TRACKS AND ROAD-BED.

The double tracks of the state (Columbia) road, at the time of the building of the Pennsylvania road, consisted of edge rails of rolled iron $3\frac{1}{2}$ in. in depth, with the bottom and top surfaces parallel, weighing probably $41\frac{1}{2}$ lbs. to the yard, and set in cast-iron chairs (14 to 15 lbs.) on ties 3 ft. apart.

The rails were fastened in the chair by iron keys driven between the chair and rail, and needing attention every few days.

*W. Hassel Wilson, C. E.

†Solomon W. Roberts, C. E.

Both these gentlemen were engineers of the early roads.

The Lancaster road was laid with a similar but perhaps heavier rail (50 lbs.), but they agreed to replace this "with H-rail during the ensuing year" (1849).

This H-rail was used by the Pennsylvania road was set in a low chair, additional half-chairs being used for the outer rail on curves. The road was ballasted with broken stone gravel and slate; but the latter was soon replaced by sandstone and limestone.

The tracks of the state road were only 4 ft. 6 in. apart, and, the cars of the Pennsylvania road being unable to pass, a change of cars remain necessary until after the purchase of the Columbia road, when the track was relaid, but not until 1858 were the wide cars able to run over the entire line.

Cast-iron chairs were used at first, but in 1857 they were replaced by wrought iron, because the cast iron was found to abrade and wear the base of the rail. Experience of a half mile of heavy T-rail laid in 1851 (spiked), and later an 83-lbs. T-rail with wrought-iron splices laid between Bolivar and Blairsville was had, and it was found to wear less rapidly than the 64 lbs. rails on the ordinary chair connection, while a heavy U-rail on the Allegheny grades proved entirely inferior (1859).

The first steel rails (150 tons) were purchased in 1862 and laid in 1864, in chairs; in 1865 270 tons of Bessemer steel rail were laid, and about this time the Philadelphia & Erie pattern (which had previously been adopted for the Philadelphia & Erie) of rail was adopted as a better form for steel. About this period also the "Thomson splice" was used—a combination of splice and plate which for the steel rails was made of steel. It was found however that the rail was worn at the expense of the splice and suffered thereby occasional fracture; and steel splices were also found to wear the rail at the top and base of the stem.

In 1868 the English fish-plate splice (having no angle) was adopted; and in 1873 the standard forms and sizes ($4\frac{1}{2}$ and $4\frac{3}{4}$) of rail splice (fitting both sizes) and joint now in use.

A report which appears to have considerable vitality has for some time been in circulation alleging that the Pennsylvania Railroad offered \$10,000 for a nut-lock, but this has no foundation whatever, as the joint now in use gives entire satisfaction.

CHARLES L. CONDIT.

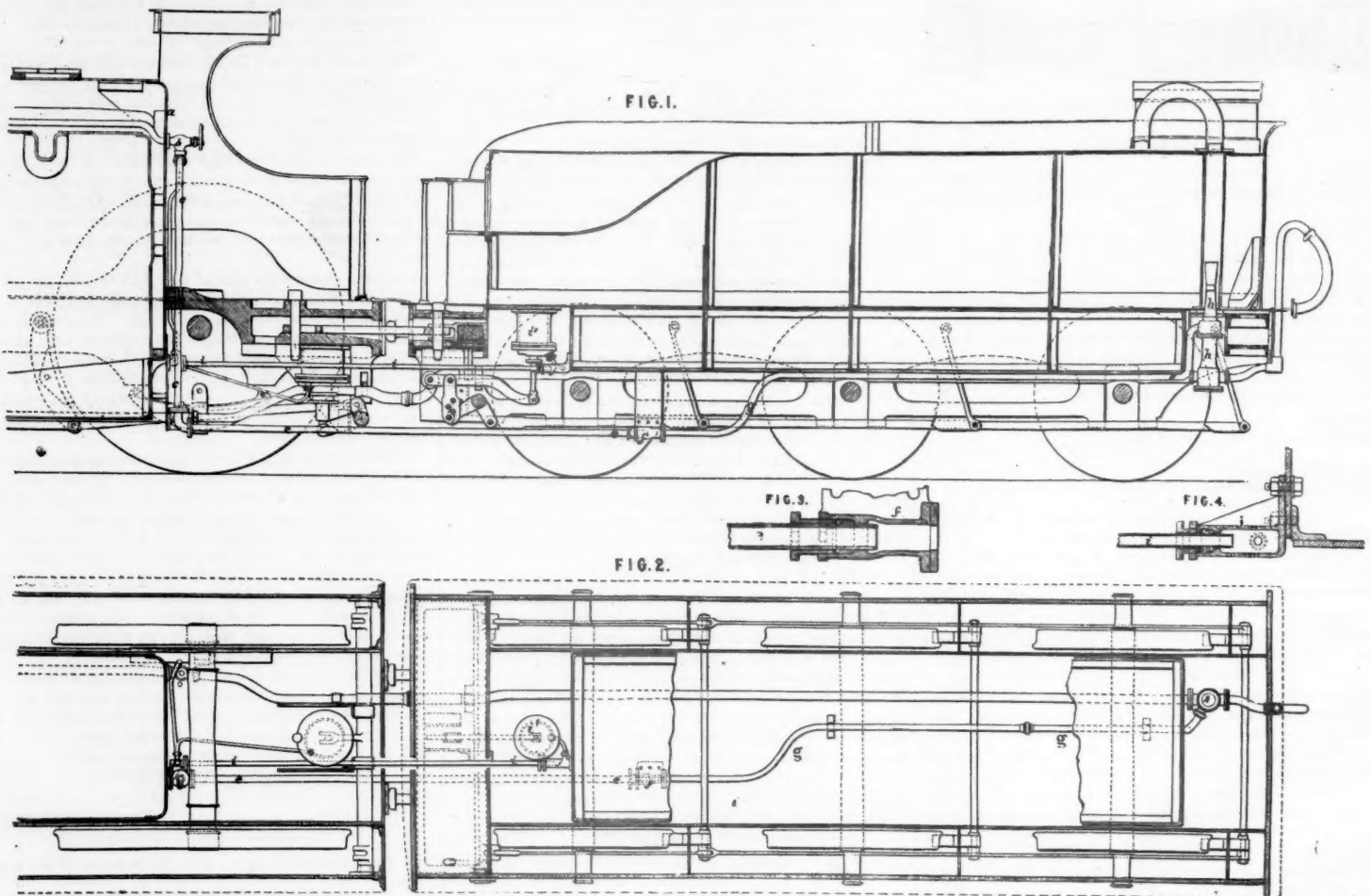
The Aggressive Policy of the Milwaukee & St. Paul.

As illustrating the long existence of causes of complaint against the Chicago, Milwaukee & St. Paul Company for its construction of lines interfering with other railroads, the following letter, bearing date of Feb. 19, 1881, from Mr. H. H. Porter, President of the Chicago, Milwaukee & St. Paul, Minneapolis & Omaha Company, to Mr. Benjamin Brewster, its Vice-President, was published last Sunday. We have heard the policy of the Milwaukee & St. Paul Company in this company criticised by others earlier than the date of this letter. Its occupation of territory far removed from that in which its old system was situated, surrounded and intersected by the lines of other companies, was looked upon as dangerous, as was the control of the Burlington, Cedar Rapids & Northern by the Rock Island Company. Mr. Porter's letter (which, by the way, shows very clearly some of the motives which must influence a railroad corporation in undertaking new lines) reads as follows:

DEAR SIR: The activity of the Milwaukee & St. Paul Railroad and their determination to build railroads everywhere, and in competition with everybody, in its ultimate results is going to be very disturbing, if not alarming. I have no doubt when they get through they will land where others, we know of, have done before, but so long as they can raise the money they will go on. Last year they built from Benton (a point on their Hastings & Dakota Division southwest of Minneapolis) into Minneapolis. Last week a resolution of their board came from New York instructing Mr. Merrill to go on and build from Benton to Mankato on the west side of the Minnesota River, passing just west of St. Peter and crossing at Mankato to a connection with their present road up there. This makes a connection between their Hastings & Dakota and Southern Minnesota lines, and puts a line just west of us all the way from St. Paul and Minneapolis to Mankato, which will be extremely disastrous to our line from Merriam Junction to Mankato, where we have some nice towns now giving us a large grain and other business. We have got to look squarely in the face this condition of the Milwaukee & St. Paul, and it is a question for our road, the Northwestern and the Rock Island, to consider, as they are making similar movements in each of their territories. In my judgment some policy will have to be adopted, and that policy a uniform one that each should carry out, to protect it against the St. Paul Company, in its own district, for while large disaster will come to them, the result will be disastrous to each of our interests also.

We are urged to commence at Henderson and build a line west between the Hastings & Dakota and the Winona & St. Peter. I dislike to do it, but it may be necessary to get out there to catch the business west of their line; as without this, by their parallel line to ours, they will catch it before it gets to us. I have no doubt from what I hear that the Milwaukee & St. Paul are also preparing to build a railroad to Ottumwa and another to Oskaloosa from the Iowa Division. We are not strong enough ourselves to do much toward checking them, but I think we can undertake to do it in our own territory, under some general plan, if the Northwestern will undertake as thoroughly to do it in theirs, and the Rock Island as thoroughly in theirs; but with the courage that exists in the Milwaukee & St. Paul and the readiness of capitalists to invest in securities, we are not stout enough alone to do much. I don't like the outlook at all. It is so easy for anybody to build a railroad anywhere.

The St. Paul Company are also preparing to build a railroad from Wabashaw to Eau Claire, and northwest from Eau Claire to secure the land grant of the Superior City line, which crosses our Bayfield line in about the centre. I am trying to defeat this in the Wisconsin Legislature, even to the extent of our building that branch ourselves. It has valuable pine on it and would pay us to build, but I don't feel like building any more road than is absolutely necessary. In my judgment we have got to have one of three policies toward the St. Paul Company: (1) Active aggression; (2) defensive (which never works); (3) keeping entirely still—making our road so good in its physical condition that we



HOLT'S PIPE CONNECTION BETWEEN ENGINE AND TENDER.

can operate as cheap as the cheapest, doing our business so satisfactorily (at low rates if necessary) as to make the public pleased with us, and keeping ourselves compact until the break comes, which it is sure to do, when we can branch out.

Yesterday Mr. Merrill came here and called a meeting and in it demanded that they have a larger share of the business between St. Paul and Chicago than they now get, it being pooled half and half in gross, or that the pool should break, when he could get it. I emphatically declined this and told him that rather than let him have any more than half we preferred he should break the pool. I don't know whether he will do it or not, but fear he will. If they make a fight it will be a severe and lasting one and cannot but prove injurious to all, but they seem to court it for some reason. They are bold, determined, and, I think, reckless, and such a fight must be made very disastrous to them if it comes. This we cannot make it without very severe punishment to ourselves, and we must take the punishment like men, simply protecting ourselves all we can.

Holt's Pipe Connection Between Locomotive Engines and Tenders.

Mr. Francis Holt, who is, what we in this country would call the "General Foreman" of the extensive shops of the Midland Railway Company, at Derby, in England, has patented an arrangement of pipes for connecting locomotives with their tenders, and for conducting water, steam or air from the one to the other, which thus takes the place of flexible hose, ball-joints and other troublesome means now used for this purpose. The engravings, figs. 1-4, represent the method of applying his invention; first, for conducting steam to an ejector *h*, on the tender, which is used in connection with the vacuum brake; second, for supplying steam to a cylinder *i*, also on the tender, and used for operating the brakes; and third, figs. 5-7 show the method employed in the Midland Railway for working an injector attached underneath the foot plate of the engine. In his specification Mr. Holt describes his invention as follows:

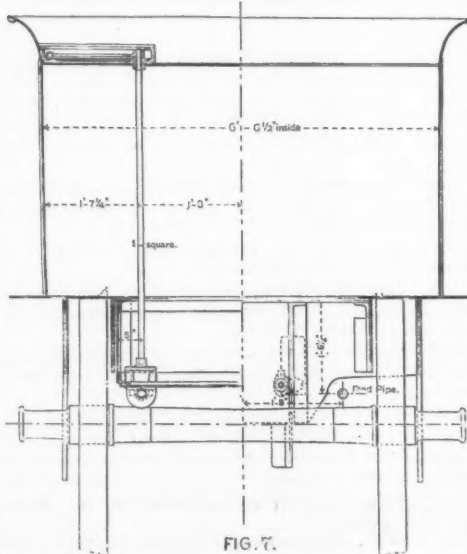
In the drawing *a* is the back plate of the fire-box of the engine, to which is fixed the valve-box *b*, connected by the pipe *c* to the elbow bracket *d*, to which one end of the brass, steel, or other metal tube *e* is attached; the other end of this tube passes through the packed gland of an ordinary stuffing box *f* fixed to the tender; and this stuffing box, which is shown on an enlarged scale in fig. 3, is connected by the pipe *g* to the usual vacuum brake ejector *h*, which is placed at the end of the tender near the carriages. The tube *e* must be of such a length as will give the flexibility required in passing through curves of a minimum radius; and the stuffing box must be sufficiently long to allow for the telescopic motion of the tube when the engine and tender are shunting or in a collision. This tube *e* and the stuffing box *f*, in which one end works, are to be used in lieu of the ordinary ball-and-socket pipes, or hose pipes, or metal coils now in general use for conveying steam from the engine to the vacuum brake ejector on the tender, the tube *e* giving absolute security for working the ejector.

In figs. 1 and 2 I have also shown how my improvements are applied to working the brakes by a steam cylinder on the tender. The tube *i* is connected at one end to the boiler of the locomotive engine, and the other end passes through the gland of the stuffing box *j*, shown also in fig. 4, which is in communication with the steam cylinder *k*, which is connected to an ordinary apparatus for applying the brakes to the wheels of the tender or carriages.

From this description the method of applying this arrangement for working an injector, shown in figs. 5-7, will be

readily understood. *K* is the injector and *n n* the pipe which supplies it with water. *O* is a stuffing box similar to that shown in figs. 3 and 4, with a valve *v* above for turning the water on and off. The steam and feed pipe connections of the injector are not shown in the drawing.

This arrangement has also been patented in this country. The experience which Mr. Holt has had in conducting the practical departments of shops so extensive as are those at



Derby, and the high reputation which he has earned in that capacity, is a sufficient guarantee that the arrangement which he has introduced is thoroughly practical in its character and worthy of the attention of American railroad locomotive superintendents. His address is, Locomotive Department, Midland Railway, Derby, England.

Savannah, Florida & Western—Rules for the Road Department.

The Road Department of the Savannah, Florida & Western Railway, under the charge of Mr. H. W. Reed, Master of Roadway, has lately issued a circular containing the following specifications for a perfect section:

I.—Line.

The track must be in true line.

II.—Surface.

The track must be in good surface; on straight lines, opposite rails must be on the same level, and on curves the proper elevation must be given to the outer rail and carried uniformly around the curve.

This elevation should begin at the proper point before entering the curve, and attain the full elevation at the be-

ginning of the curve, and the same must be done at the end of the curve.

The proper point to begin elevation, and the maximum elevation for each curve, must be obtained from the superintendents, who will be advised from this office.

III.—Joints.

The joints of the rails must be midway between the joint ties and opposite the centres of the rails in the other side of the track.

A proper distance must be left between the ends of the rails for expansion. This distance in summer should be 1-16 in. and in winter should be 3-16 in.

The fish plates must be properly put on with the full number of bolts and nuts, and kept tight.

The rails must be spiked inside and outside on each tie, and spikes must be driven in such position as to keep the ties at right angles to the rails.

IV.—Ballast.

The track should be ballasted with clean, coarse sand, for a depth of 12 in. below the ties, and filled in between the rails of the track, over the ties, to the height of $\frac{1}{4}$ in. below the tops of the rails, except near the rails, where clearance should be allowed for flanges of wheels, and outside of the rails the track should be filled with the same material to a level with the tops of the ties to the full width of the top of the bank, which shall not be less than 14 ft., with edges parallel with the rails.

V.—Cross Ties.

The cross ties must be evenly spaced 2 ft. between centres. Where there is a difference in the size of ties put in during regular work, the larger ones should be selected for joint ties.

Where a tie is crooked or twisted, it should be adzed so that the rails may have a bearing across the entire breadth of the tie.

VI.—Ditches and Waterways.

All ditches should be kept free of obstruction, straight and uniform, and of sufficient size.

Outside, or surface ditches, should be made wherever needed.

The inside edges of the ditches should be kept at a distance from the centre line of the road of one and a half times the height of the bank added to 10 ft.

All waterways should be kept free from obstructions a sufficient distance on either side of the road. Old timber and brush should never be allowed to remain at a trestle or culvert opening.

VII.—Switches and Sidings.

Switches and frogs must be kept well lined and in good order, all the parts in proper position and all bolts tight.

Guard rails must be placed at $1\frac{1}{4}$ in. from main rails and properly braced.

Wharton switches should work freely, so that the lever will drop of its own weight. Split switches should be kept clean and free from sand and rubbish around the tie bars and switch rails so that nothing can work between the points and the line rails. At stub switches the clamps of tie bars should fit closely to the base of the rails, and no lost motion should be allowed; low joints must not be allowed at the head blocks, and the switch rails should have a bearing on all of the ties.

No wider space should be allowed between the ends of the rails than will be necessary for ease of working at all times, and no lip between the edges of the rails should be allowed when the switch is in position for either track.

Sidings must be kept in proper order.

VIII.—Cattle Guards.

Cattle guards must be kept in good order, and the fences properly maintained to the outside edges of the ditches and fences whitewashed.

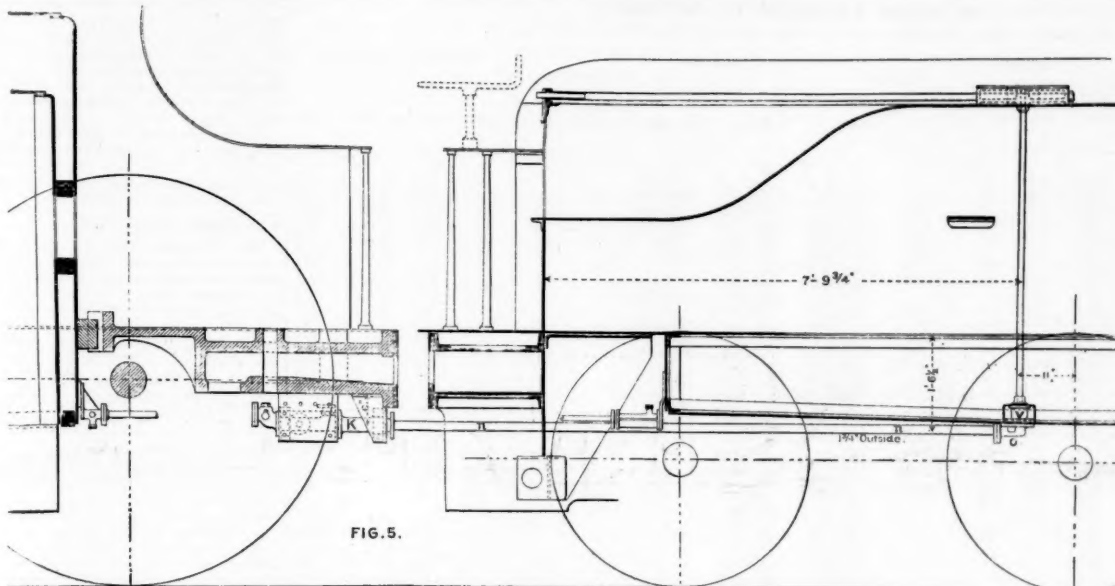


FIG. 5.

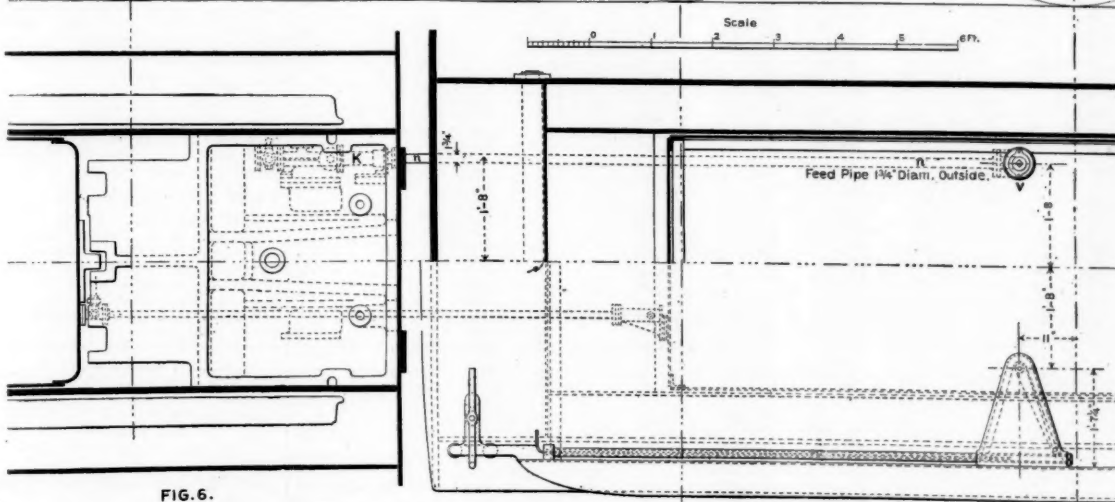


FIG. 6.

HOLT'S PIPE CONNECTION BETWEEN ENGINE AND TENDER.

IX.—Road Crossings.

Road crossing plank must be securely spiked, and should be $\frac{1}{4}$ in. below the top of the rails, and $2\frac{1}{2}$ in. from the gauge line; the ends and inside edges of the planks should be beveled off.

X.—Station and Section Grounds.

All platforms, fences, wood racks and grounds must be kept clean and in good order.

XI.—Policing.

All material must be picked up and piled at the proper points at the close of each day's work. Bushes and vines must be kept cut close to the ground within the limits of the right-of-way, and telegraph poles must be kept in proper position. Old timber that can be made serviceable should be neatly piled at the proper points, and all other should be burned.

The "Fitness" which Qualifies for the New York Railroad Commission.

The New York Tribune of Nov. 27, says in an article on the political situation in New York:

The great aim at present is to control the Board of Railroad Commissioners and the speakership of the Assembly. Tammany Hall has several candidates for Railroad Commissioners, and the County Democracy has one or two. Among these are such self-sacrificing patriots as John B. Haskin, Alderman Sauer, and others of equal experience in railroad matters. Ex-Senator Kernan, of Utica, is mentioned as a probable nominee; but he says he will not accept the place if offered to him. The dead-lock between the Chamber of Commerce and the Board of Trade and Transportation and the Anti-Monopoly League in regard to the appointment of a Commissioner is causing a good deal of talk. The Chamber of Commerce is the oldest institution of the kind in the country, having been organized 112 years ago. It has a membership of several hundred of the leading merchants of the city, no person being admitted as a member unless engaged in trade and commerce, or in pursuits directly connected therewith. That such a representative body as this, of persons most interested in the Railroad Commission bill, should be ignored in the selection of a person for Commissioner under the new law, by two bodies like the Board of Trade and Transportation and the National Anti-Monopoly League causes a good deal of indignation among business men.

The law passed by the Legislature providing for a Railroad Commission states that one of the commissioners "shall be selected upon the recommendation of the presidents and executive committees or a majority of such, of the Chamber of Commerce, the Board of Trade and Transportation and the National Anti-Monopoly League as said organization now exists, or any two of such organizations so represented, in case of disagreement." In order that he could not be circumvented in this matter, Mr. Thurber had the Board of Trade and Transportation, and also the National Anti-Monopoly League incorporated before the Governor signed the Commission bill. The corporators of the League are nine in number, as follows: F. B. Thurber, grocer; Lucius E. Chittenden, lawyer; Henry Nichols, politician; John W. Keogh, shoemaker and Greenback politician; James E. Serrell, civil engineer; Courtlandt Palmer, no occupation;

Wilson S. Wolf, lawyer and politician; R. P. Gibson, physician, and William Ward, banker. In addition to these nine corporators, the Executive Committee consists of Theodore E. Tomlinson, a Greenback politician, and William H. Wiley, who is or was connected with Mr. Thurber in business. The constitution of this organization of nine men, all of whom are said to have business relations with Mr. Thurber, provides that there shall be a committee on membership of three, without whose recommendation no person can become a member. As Mr. Thurber virtually appoints this committee of three, he is thus absolutely certain of controlling "the Executive Committee of the National Anti-Monopoly League" as it "now" exists, as provided in the Railroad Commission bill.

The Board of Trade and Transportation is incorporated and controlled by Mr. Thurber, on a similar plan. He is a member of the Executive Committee in this organization also, and so is W. H. Wiley, and others having business relations with Thurber. These two close corporations, in no wise representing business men of the city, met—nobody knows where apparently—and selected ex-Senator O'Donnell for a Railroad Commissioner, and then informed the Chamber of Commerce, of which Mr. Thurber is also a member, of what they had done. Of course the Chamber of Commerce did not agree with Mr. Thurber and fixed upon A. B. Hepburn as a fit man for Commissioner. Mr. O'Donnell was formerly the leader of the Prohibition party in this state, and in a close election if the Republican managers wanted to prevent the Prohibition party from putting candidates in the field, and thus drawing away votes from the regular Republican nominees, they had to see Mr. O'Donnell about it. The power he held in this way secured him a Republican nomination and election as State Senator and also the clerkship of the Assembly for two terms. Leading Democrats assert that an amendment will be passed to the Commission bill as soon as the Legislature meets, taking away from these outside bodies any power to dictate to the Governor as to whom he shall appoint. Leading lawyers assert that the bill as it now stands is unconstitutional.

Technical Education.

Mr. H. W. Reed, Master of Roadway of the Savannah Florida & Western Railway, has established a system of instruction for "engineers of permanent way," which is commended as a kind of technical education with no nonsense about it. Whether it is all that it should be will not be discussed here, but we venture the assertion that a student who has had a good common-school education to begin with, and has taken the course described below, will, as a track or bridge superintendent, or an engineer of permanent way—if that title suits better—command better pay, and will, at the end of his apprenticeship, have less difficulty in getting an appointment in such a position, than he would have if he had taken a course in civil engineering at a technical school. It is not said that the technical school course of study is not a good thing, but if it were our duty to hire men to take charge of a railroad track, and we were obliged to choose between the graduates taught

in Professor Reed's school and those with no other knowledge than that which they obtained at Troy, or Hoboken or the Boston Institute of Technology, we should take Mr. Reed's graduates. In other words for teaching the special art and occupation of keeping a railroad track in repair Mr. Reed's school will beat the technical colleges "every time."

The following order gives the curriculum of Mr. Reed's school:

On Nov. 1 the following system of apprenticeship will go into effect in this department:

I. All apprentices will be assigned to one gang, to be called the "Apprentice Gang," which will be under the charge of a competent instructor and foreman, and will consist of ten members.

II. The apprentice gang will be assigned to duty on various parts of the road, where the greatest differences occur in the condition of soil, grade and alignment, in order that a thorough mastery of the business may be acquired.

III. In the organization and management of the apprentice gang the following rules will be observed:

a. Appointments will only be made upon written applications, accompanied by satisfactory evidences as to ability, character and sobriety.

b. The period of apprenticeship will be one year from date of appointment. Any time lost during this period will be added to the period.

c. The pay of an apprentice will be 75 cents per day for the first three months; \$1 per day for the second three months; \$1.25 per day for the third three months, and \$1.50 per day for the last three months, without rations. Each period of three months must be full time.

d. After the expiration of the prescribed period of apprenticeship, and upon passing a satisfactory examination, apprentices will be eligible for promotion to the foremanship of either track or bridge gangs, and these appointments to vacancies will be made in the order in which the candidates complete their terms of apprenticeship.

e. Should an apprentice at any time be found incompetent, he will be removed.

f. The foreman of the apprentice gang will get full instructions as to the management of his gang from this office.

g. This gang will be required to do all kinds of bridge and track work; will be thoroughly schooled in the management of a section and in the making of reports, and will be allowed to leave no piece of work until it has been completed in the most thorough manner possible.

THE SCRAP HEAP.

Locomotive Building.

The Indianapolis & St. Louis shops at Mattoon, Ill., have lately completed two passenger engines for the road.

The Mason Machine Works in Taunton, Mass., recently delivered a double-bogie engine weighing 35 tons to the Boston, Revere Beach & Lynn road.

The Hannibal & St. Joseph shops in Hannibal, Mo., recently turned out a very handsome passenger engine, built under the direction of Mr. James Long, Superintendent of

RAILROAD EARNINGS IN OCTOBER.

| NAME OF ROAD. | MILEAGE. | | | | | EARNINGS. | | | | | EARNINGS PER MILE. | | | | |
|--------------------------|----------|--------|-------|-------|-------|------------|------------|-----------|------------|-------|--------------------|--------|-------|-------|-------|
| | 1882. | 1881. | Inc. | Dec. | P. c. | 1882. | 1881. | Increase. | De-crease. | P. c. | 1882. | 1881. | Inc. | Dec. | P. c. |
| Ala. Gt. Southern | 290 | 290 | ..... | ..... | ..... | \$ 88,674 | \$ 80,875 | 7,799 | ..... | 9.6 | \$ 306 | \$ 279 | 27 | ..... | 9.6 |
| Atchison, Top. & S. F. | 1,832 | 1,780 | 72 | ..... | 4.1 | 1,402,023 | 1,263,023 | 139,000 | ..... | 11.1 | 767 | 717 | 50 | ..... | 7.0 |
| Buff., Pitts. & West. | 223 | 205 | 18 | ..... | 8.8 | 92,015 | 88,189 | 3,826 | ..... | 33.9 | 413 | 332 | 81 | ..... | 24.5 |
| Bur., Ced. Rap. & No. | 689 | 504 | 96 | ..... | 17.0 | 300,155 | 221,748 | 78,407 | ..... | 35.3 | 435 | 393 | 62 | ..... | 16.0 |
| Central of Georgia | 720 | 712 | 14 | ..... | 1.9 | 426,500 | 414,489 | 12,011 | ..... | 2.9 | 587 | 582 | 5 | ..... | 0.9 |
| Central Iowa | 244 | 210 | 34 | ..... | 16.1 | 108,464 | 87,913 | 20,551 | ..... | 23.4 | 445 | 419 | 26 | ..... | 6.4 |
| Central Pacific | 3,100 | 2,775 | 325 | ..... | 11.8 | 2,400,000 | 2,507,857 | ..... | 98,857 | 3.9 | 777 | 904 | 127 | ..... | 14.1 |
| Ches. & Ohio | 517 | 435 | 82 | ..... | 18.9 | 347,882 | 236,366 | 111,516 | ..... | 47.2 | 673 | 545 | 128 | ..... | 24.1 |
| Chicago & Alton | 847 | 847 | ..... | ..... | ..... | 272,032 | 271,943 | 89 | ..... | 5.2 | 959 | 911 | 48 | ..... | 5.2 |
| Chi. & Eastern Ill. | 245 | 232 | 13 | ..... | 5.7 | 169,579 | 158,857 | 10,722 | ..... | 6.1 | 692 | 670 | 16 | ..... | 2.4 |
| Chi. Mil. & St. Paul | 4,380 | 3,950 | 430 | ..... | 10.9 | 2,251,000 | 1,591,052 | 659,948 | ..... | 41.6 | 514 | 403 | 111 | ..... | 27.7 |
| Chi. & Northwestern | 3,400 | 2,944 | 456 | ..... | 15.6 | 2,592,100 | 2,341,097 | 251,003 | ..... | 10.7 | 762 | 796 | 34 | ..... | 4.3 |
| Chi. St. P. M. & O. | 1,070 | 960 | 110 | ..... | 11.5 | 546,671 | 379,029 | 167,642 | ..... | 44.1 | 511 | 395 | 116 | ..... | 29.1 |
| Chi. & West Mich. | 382 | 367 | 15 | ..... | 4.1 | 131,163 | 123,010 | 8,153 | ..... | 6.6 | 343 | 335 | 8 | ..... | 2.4 |
| Cin., Ind. St. L. & Chi. | 384 | 342 | 42 | ..... | 12.3 | 250,000 | 221,320 | 28,680 | ..... | 13.0 | 651 | 647 | 4 | ..... | 0.6 |
| Cin., N. O. & T. Pac. | 336 | 336 | ..... | ..... | ..... | 234,031 | 233,386 | 645 | ..... | 0.3 | 687 | 685 | 2 | ..... | 0.3 |
| Cleve., Akron & Col. | 144 | 144 | ..... | ..... | ..... | 24,718 | 37,969 | 13,251 | ..... | 44.0 | 360 | 264 | 96 | ..... | 36.0 |
| Clev., Hock. & V. & Tol. | 320 | 320 | ..... | ..... | ..... | 272,579 | 249,157 | 23,422 | ..... | 9.0 | 832 | 779 | 53 | ..... | 6.9 |
| Denver & R. G. | 1,160 | 970 | 190 | ..... | 19.6 | 639,598 | 638,432 | 1,166 | ..... | 1.2 | 544 | 658 | 114 | ..... | 17.3 |
| Des M. & Ft. Dodge | 108 | 84 | 24 | ..... | 28.6 | 31,595 | 40,061 | 8,466 | ..... | 21.1 | 283 | 477 | 194 | ..... | 40.7 |
| Det., Lan. & Nor. | 226 | 226 | ..... | ..... | ..... | 153,962 | 130,942 | 23,020 | ..... | 17.7 | 681 | 579 | 102 | ..... | 17.7 |
| E. Tenn., Va. & Ga. | 900 | 900 | ..... | ..... | ..... | 372,235 | 315,644 | 56,591 | ..... | 18.0 | 414 | 351 | 63 | ..... | 18.0 |
| Evansv. & T. H. | 157 | 144 | 13 | ..... | 9.0 | 73,408 | 63,392 | 10,016 | ..... | 15.4 | 468 | 440 | 28 | ..... | 6.4 |
| Flint & Pere Mar. | 345 | 318 | 27 | ..... | 8.5 | 199,064 | 186,069 | 12,995 | ..... | 7.0 | 577 | 585 | 8 | ..... | 1.4 |
| G. B. W. & St. P. | 220 | 220 | ..... | ..... | ..... | 39,001 | 33,931 | 5,069 | ..... | 14.7 | 177 | 154 | 23 | ..... | 13.3 |
| Gulf, Col. & S. F. | 483 | 320 | 163 | ..... | 50.9 | 227,506 | 127,421 | 100,085 | ..... | 78.6 | 471 | 268 | 203 | ..... | 75.9 |
| Hannibal & St. Jo. | 292 | 292 | ..... | ..... | ..... | 238,442 | 231,913 | 6,529 | ..... | 2.8 | 817 | 794 | 23 | ..... | 2.9 |
| Houston, E. & W. Tex. | 104 | 88 | 16 | ..... | 18.2 | 24,096 | 18,861 | 5,235 | ..... | 27.6 | 232 | 214 | 18 | ..... | 8.4 |
| Ill. Cen. Ill. lines | 918 | 918 | ..... | ..... | ..... | 674,887 | 646,190 | 28,697 | ..... | 4.4 | 734 | 704 | 30 | ..... | 4.3 |
| Iowa lines | 402 | 402 | ..... | ..... | ..... | 190,438 | 169,048 | 21,390 | ..... | 12.7 | 474 | 421 | 53 | ..... | 12.7 |
| Ind., Bloom. & West. | 685 | 555 | 140 | ..... | 25.2 | 269,004 | 228,667 | 40,337 | ..... | 17.6 | 387 | 412 | 25 | ..... | 6.0 |
| Kan. City, F. Scott & G. | 360 | 320 | 40 | ..... | 12.5 | 175,578 | 150,504 | 25,074 | ..... | 16.6 | 488 | 470 | 18 | ..... | 3.8 |
| Lake Erie & Western | 386 | 386 | ..... | ..... | ..... | 133,698 | 118,593 | 15,105 | ..... | 12.7 | 346 | 307 | 39 | ..... | 12.7 |
| Little Rock & Ft. S. | 168 | 168 | ..... | ..... | ..... | 61,592 | 60,151 | 1,441 | ..... | 2.4 | 367 | 358 | 9 | ..... | 2.4 |
| Little R. Miss. R. & T. | 173 | 156 | 17 | ..... | 10.9 | 39,055 | 31,455 | 7,600 | ..... | 24.0 | 236 | 202 | 34 | ..... | 11.9 |
| Long Island | 335 | 335 | ..... | ..... | ..... | 198,532 | 183,313 | 15,219 | ..... | 7.9 | 593 | 487 | 106 | ..... | 21.6 |
| Louisville & Nash. | 2,025 | 1,840 | 185 | ..... | 10.1 | 1,212,155 | 1,002,950 | 209,205 | ..... | 20.9 | 500 | 545 | 45 | ..... | 8.2 |
| Louisv., N. A. & Chi. | 380 | 200 | 90 | ..... | 31.0 | 151,000 | 99,571 | 51,429 | ..... | 51.5 | 397 | 343 | 54 | ..... | 15.9 |
| Mar., Hought. & Ont. | 97 | 88 | 9 | ..... | 10.2 | 118,218 | 101,736 | 16,482 | ..... | 16.1 | 1,219 | 1,156 | 63 | ..... | 5.4 |
| Mich., L. S. & West. | 296 | 296 | ..... | ..... | ..... | 83,414 | 71,832 | 11,582 | ..... | 16.1 | 282 | 276 | 6 | ..... | 2.1 |
| Mo. Pacific lines | 387 | 300 | 87 | ..... | 29.0 | 113,143 | 78,347 | 34,796 | ..... | 44.8 | 282 | 261 | 21 | ..... | 8.1 |
| Central Branch | 775 | 623 | 152 | ..... | 24.4 | 411,497 | 308,322 | 103,175 | ..... | 33.5 | 531 | 495 | 36 | ..... | 7.2 |
| Int. & Gt. Northern | 1,300 | 1,003 | 297 | ..... | 29.5 | 687,703 | 562,194 | 125,509 | ..... | 22.3 | 525 | 560 | 35 | ..... | 5.5 |
| Mo. Kan. & Tex. | 935 | 800 | 135 | ..... | 16.9 | 800,525 | 633,839 | 166,686 | ..... | 35.7 | 920 | 792 | 128 | ..... | 16.2 |
| Mo. Pacific | 810 | 685 | 125 | ..... | 18.3 | 809,394 | 719,239 | 90,155 | ..... | 12.5 | 909 | 1,050 | 141 | ..... | 13.4 |
| St. L. I. M. & So. | 1,400 | 1,280 | 120 | ..... | 9.4 | 541,901 | 419,203 | 122,698 | ..... | 29.4 | 387 | 428 | 41 | ..... | 9.6 |
| Texas & Pacific | 528 | 506 | 22 | ..... | 4.3 | 265,201 | 256,924 | 8,277 | ..... | 3.2 | 502 | 508 | 6 | ..... | 1.1 |
| Mobile & Ohio | 348 | 348 | ..... | ..... | ..... | 180,319 | 172,121 | 8,198 | ..... | 4.8 | 518 | 495 | 23 | ..... | 4.8 |
| Nash., Chat. & St. L. | 396 | 356 | 40 | ..... | 11.2 | 130,145 | 261,200 | 48,945 | ..... | 18.7 | 783 | 734 | 49 | ..... | 6.7 |
| N. Y. & N. England | 561 | 565 | 40 | ..... | 7.1 | 555,023 | 455,277 | 99,746 | ..... | 21.9 | 982 | 806 | 176 | ..... | 21.9 |
| N. P. Pa. & Ohio | 428 | 428 | ..... | ..... | ..... | 272,318 | 245,530 | 26,788 | ..... | 10.5 | 636 | 576 | 60 | ..... | 10.5 |
| Norfolk & Western | 328 | 328 | ..... | ..... | ..... | 550,225 | 440,601 | 109,624 | ..... | 25.3 | 1,688 | 1,379 | 309 | ..... | 22.3 |
| Northern Central | 1,420 | 972 | 448 | ..... | 46.1 | 834,400 | 588,955 | 245,445 | ..... | 29.4 | 588 | 601 | 13 | ..... | 2.1 |
| Northern Pacific | 232 | 232 | ..... | ..... | ..... | 114,271 | 81,631 | 32,640 | ..... | 40.1 | 493 | 352 | 141 | ..... | 40.1 |
| Ohio Central | 138 | 128 | 10 | ..... | 7.8 | 40,602 | 32,289 | 8,313 | ..... | 23.1 | 294 | 252 | 42 | ..... | 16.7 |
| Ohio Southern | 1,980 | 1,925 | 55 | ..... | 2.8 | 4,660,054 | 3,672,971 | 987,083 | ..... | 26.6 | 2,354 | 1,908 | 446 | ..... | 23.5 |
| Pennsylvania | 996 | 904 | 92 | ..... | 10.2 | 58,863 | 50,233 | 8,630 | ..... | 0.6 | 232 | 239 | 7 | ..... | 2.9 |
| Phila. & Reading | 757 | 757 | ..... | ..... | ..... | 2,229,513 | 1,989,948 | 239,565 | ..... | 12.0 | 2,231 | 2,002 | 229 | ..... | 11.4 |
| Rich. & Danville | 193 | 193 | ..... | ..... | ..... | 436,500 | 376,300 | 60,200 | ..... | 16.0 | 577 | 497 | 80 | ..... | 16.0 |
| St. L. A. & T. H. M. L. | 121 | 121 | ..... | ..... | ..... | 131,697 | 131,697 | 0 | ..... | 6.7 | 721 | 675 | 46 | ..... | 6.7 |
| Belleville Line | 146 | 146 | ..... | ..... | ..... | 140,562 | 140,562 | 0 | ..... | 8.4 | 739 | 600 | 139 | ..... | 23.4 |
| St. Louis & Cairo | 690 | 645 | 15 | ..... | 2.4 | 36,547 | 40,585 | 4,038 | ..... | 9.9 | 250 | 277 | 27 | ..... | 9.9 |
| St. Louis & San Fran. | 175 | 175 | ..... | ..... | ..... | 360,993 | 308,569 | 52,424 | ..... | 17.0 | 547 | 479 | 68 | ..... | 14.2 |
| St. Paul & Duluth | 1,060 | 869 | 194 | ..... | 22.4 | 146,615 | 73,088 | 73,527 | ..... | 98.5 | 838 | 421 | 417 | ..... | 98.5 |
| St. P., Minn. & Man. | 128 | 128 | ..... | ..... | ..... | 979,597 | 605,708 | 373,889 | ..... | 61.5 | 924 | 699 | 225 | ..... | 32.2 |
| Scioto Valley | 243 | 243 | ..... | ..... | ..... | 53,650 | 49,390 | 4,260 | ..... | 8.7 | 419 | 388 | 31 | ..... | 8.7 |
| South Carolina | 550 | 435 | 115 | ..... | 26.4 | 165,088 | 139,292 | 25,796 | ..... | 18.6 | 679 | 573 | 106 | ..... | 18.6 |
| Tol. Cin. & St. L. | 3,740 | 3,450 | 290 | ..... | 8.4 | 3,158,337 | 2,440,601 | 717,736 | ..... | 29.8 | 1,778 | 1,171 | 607 | ..... | 51.8 |
| Union Pacific | 280 | 280 | ..... | ..... | ..... | 132,935 | 137,505 | 4,570 | ..... | 3.3 | 475 | 492 | 17 | ..... | 3.4 |
| Utah Central | 142 | 142 | ..... | ..... | ..... | 50,907 | 52,767 | 1,860 | ..... | 3.5 | 353 | 366 | 13 | ..... | 3.5 |
| Vicks. & Meridian | 352 | 352 | ..... | ..... | ..... | 159,579 | 145,738 | 13,841 | ..... | 9.5 | 452 | 414 | 38 | ..... | 9.5 |
| Va. Midland | 3,425 | 3,300 | 125 | ..... | 3.8 | 1,595,680 | 1,397,781 | 197,899 | ..... | 14.2 | 466 | 424 | 42 | ..... | 9.9 |
| Wab. St. L. & Pacific | 390 | 390 | ..... | ..... | ..... | 115,854 | 78,782 | 37,102 | ..... | 47.0 | 297 | 202 | 95 | ..... | 47.0 |
| Wisconsin Central | 54,915 | 49,713 | 5,202 | ..... | 10.5 | 38,985,932 | 33,453,474 | 5,532,458 | ..... | 16.6 | 710 | 673 | 37 | ..... | 5.5 |
| Total 74 roads. | 54,915 | 49,713 | 5,202 | ..... | 10.5 | 38,985,932 | 33,453,474 | 5,532,458 | ..... | 16.6 | 710 | 673 | 37 | ..... | 5.5 |
| Total inc. or dec. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

SUPPLEMENTARY TABLE.

| | | | | | | | | | | | | | | | |
|--------------------------------|-------|-------|-------|-------|-------|-----------|-----------|---------|-------|------|--------|--------|-------|-------|-------|
| Met. Elevated | 18 | 18 | ..... | ..... | ..... | 230,082 | 223,027 | 7,055 | ..... | 3.1 | 12,227 | 12,390 | 163 | ..... | 1.3 |
| N. Y. Elevated | 14 | 14 | ..... | ..... | ..... | 318,737 | 260,313 | 58,424 | ..... | 22.4 | 22,767 | 18,594 | 4,173 | ..... | 22.4 |
| Oregon Ry. & Nav. Co. | 2,103 | 1,931 | 172 | ..... | 8.9 | 507,200 | 464,782 | 42,418 | ..... | 9.1 | 241 | 240 | 1 | ..... | 0.4 |
| Palla. & Read. Coal & Iron Co. | ..... | ..... | ..... | ..... | ..... | 1,592,217 | 1,441,674 | 150,543 | ..... | 10.4 | ..... | ..... | ..... | ..... | ..... |

* Not in the table of earnings for the nine months.
 † Does not include branch or leased lines.

‡ Includes all lines east of Pittsburgh and Erie.
 § Railroad, 528 miles; steamboat and steamship lines, 1,575 miles.

machinery. The cab and wood-work are painted in Japanese style.

H. K. Porter & Co., in Pittsburgh, have a number of orders in hand for light locomotives, and have six in the shop nearly ready for delivery.

The Stephens Locomotive Co. has filed articles of incorporation in New York; capital stock, \$1,000,000.

Car Notes.

The Harlan & Hollingsworth Co. in Wilmington, Del., are building six very handsome dining cars for the Chicago

sent to the Philadelphia agent and in a few days he was asked why he did not remit the money for the ticket. The agent replied that the trunk had not been redeemed. A day or two after this the railroad man was in Philadelphia and he sent for the agent and they looked for the trunk. They found it all right, the check bore the number of the duplicate, and the railroad felt that he had not been swindled after all, and he proceeded to open the trunk. It was filled with bricks and old paper.—Pittsburgh Telegraph.

At the Depot.

At 9 o'clock yesterday morning an old woman sat in the Michigan Central station wiping the tears from her eyes. It was nobody's business in particular to inquire whether she had fallen heir to a million dollars, or was traveling through life with a broken heart; but one certain man stepped forward after a time and made some inquiries. Then he passed around among the crowd and said: "Gentlemen, here is a poor old woman who wants to get to Columbus to her friends. Let's take up a collection." In the course of four or five minutes a purse of \$3 was made up, but when he had counted it the man said: "Gentlemen, let's chip in enough more to buy her a new dress. I'm a poor man; but here's a quarter for the old lady." The purse was now increased to nearly \$7, and the woman had just pocketed the money; when a man stepped forward and said to the collector of the purse: "Why, Banks, is this you?" "Of course it is," "And that woman is your own wife?" "Well, Mr. Knickerbocker," replied the man as he buttoned his coat; "it's a mighty mean man who won't chip in a quarter to buy his own wife a dress and help her off on a visit."—Detroit Free Press.

Phosphor-Bronze Slide Valves.

The Phosphor-Bronze Co. exhibited some phosphor-bronze slide valves at the Northeast Coast Exhibition. Amongst them was a pair of slide valves, No. 845 express engine of the Northeastern Railway Co., after 6½ years' working, during which the engine has run 261,182 miles between Newcastle and Edinburgh. They have now been taken out to replace the cylinders with a pair of a different type. Mr. Fletcher, Assistant Locomotive Superintendent, gives the following upon these slides and another pair still at work in No. 844 express engine: "Mileage of No. 845 engine with phosphor-bronze slides, from March 30, 1876, to present time, Oct. 4, 1882, 261,182 miles. Mileage of No. 844 engine with phosphor-bronze slide, from April 20, 1876, to present time, 236,220 miles." The original thickness of these slides was 1 in., and they are worn down to ¾ in. thick. Gun-metal slides rarely exceed eight months' work when they are worn out. The cylinder faces are, we are informed, in beautiful condition, the wearing being as it should be on the valves. The engines Nos. 844 and 845 are of the following dimensions: Cylinders, 17 in. diameter by 24 in. stroke. Four coupled wheels, 7 ft. diameter; working pressure, 40 lbs. per square inch. Weight of engine in working trim, 139 tons 16 cwt. Weight of tender, 26 tons 4 cwt.—The Engineer.

ANNUAL REPORTS.

Central Railroad & Banking Co., of Georgia.

The following statements are from an advance copy of President Alexander's report for the year ending Aug. 31, 1882, the 47th fiscal year of the corporation. The lines worked during the year were as follows:

| | Miles. |
|---|--------|
| Central Railroad..... | 192.0 |
| Savannah, Ga., to Macon..... | 192.0 |
| Gordon to Eatonton..... | 39.0 |
| Augusta Branch, Millen to Augusta..... | 53.0 |
| Total Savannah Division..... | 284.0 |
| Atlanta Division, Macon to Atlanta..... | 102.5 |

| | |
|---|-------|
| Total Central R. R..... | 386.5 |
| Southwestern Railroad: | |
| Macon, Ga., to Eufaula, Ala..... | 143.0 |
| Muscogee Branch, Fort Valley, Ga., to Columbus..... | 71.0 |
| Fort Gaines Branch, Cuthbert to Fort Gaines..... | 20.0 |
| Albany Branch, Smithville to Albany..... | 23.5 |
| Blakely Extension, Albany to Blakely..... | 50.0 |
| Perry Branch, Fort Valley to Perry..... | 12.5 |
| Eufaula to Clayton..... | 20.0 |
| Total worked..... | 340.0 |
| Total owned..... | 726.5 |

The road owned is the line from Savannah to Macon and the Atlanta Division, 294.5 miles. The Eatonton Branch, Augusta Branch (Augusta & Savannah road) and the Southwestern road are leased. The company owns the chief interest in the Southwestern road, and its bonds are issued under a joint mortgage covering that road as well as its own.

The company also owns the Ocean Steamship Company, whose lines run between Savannah and New York; one-half interest in the Western Railroad of Alabama; controlling interest in the Mobile & Girard and other connecting lines. The Montgomery & Eufaula road is owned by the estate of the late President of this company as purchaser at foreclosure sale, and is worked in the interest of this company. The company works under contract the Upson County road, 16.5 miles, and one or two other short branches.

The company holds one-half interest in the lease of the Georgia Railroad, the other half being owned by the Louisville & Nashville Company.

The lines were increased last year by the extension of the Blakely line of the Southwestern road from the old terminus at Arlington to Blakely, 14.5 miles.

The President's report is largely occupied with a statement of the relation of the company to the several other corporations in which it holds a controlling interest. This statement is of much interest, but too long for reproduction at present.

The following table will give a condensed view of the interest of the Central in the connecting system:

| | Miles. | Indebtedness. | Borne by Central interest. |
|------------------------------|--------|---------------|----------------------------|
| Connecting roads. | Total. | Total. | Total. |
| Western of Alabama..... | 138 | 69 | \$1,543,000 |
| Georgia R. R. lease..... | 443 | 221.5 | 10,831,500 |
| Fort Royal, Griffin & N..... | 112 | 67 | 300,000 |
| Savannah, Griffin & N..... | 63 | 60.5 | |
| Upson County..... | 16 | 12 | |
| Mobile & Girard..... | 85 | 27 | 1,093,000 |
| Totals..... | 857 | 458 | \$13,767,500 |

The controlled connecting system may therefore be taken as 458 miles, with liens prior to the Central interest averaging \$14,677 per mile.

The floating debt of all the roads composing the Central system proper at the commencement of the present fiscal year (Sept. 1, 1882) was as follows:

| | |
|---------------------------------|-----------|
| Central R. R. & Banking Co..... | \$825,000 |
| Ocean Steamship Co..... | 100,000 |
| Total..... | \$925,000 |

This is a reduction of \$1,451,348 during the last fiscal year. The report says: "This reduction was made by the disposal of securities held among the assets of the company, available for the purpose without interfering with our in-

RAILROAD EARNINGS TEN MONTHS ENDING OCTOBER 31.

| NAME OF ROAD. | MILEAGE. | | | | | EARNINGS. | | | | | EARNINGS PER MILE. | | | | | | |
|---------------------------|----------|--------|-------|------|-------|-------------|-------------|------------|---------|-------|--------------------|--------|--------|-------|-------|------|------|
| | 1882. | 1881. | Inc. | Dec. | P. c. | 1882. | 1881. | Increase. | Dec. | P. c. | 1882. | 1881. | Inc. | Dec. | P. c. | | |
| | | | | | | \$ | \$ | \$ | \$ | | \$ | \$ | \$ | \$ | | | |
| Ala. Gt. Southern | 290 | 290 | | | | 663,844 | 634,218 | 29,626 | | | 6.3 | 2,280 | 2,152 | 137 | 6.3 | | |
| Atchison, Top. & S. F. | 1,813 | 1,639 | 174 | | 10.6 | 11,814,821 | 9,822,371 | 1,992,450 | | | 20.3 | 6,517 | 5,993 | 524 | 8.7 | | |
| Buffalo, Pitts. & West. | 214 | 205 | 9 | | 4.4 | 741,080 | 559,365 | 181,715 | | | 32.4 | 3,463 | 2,729 | 734 | 27.2 | | |
| Bur. Cedar Rap. & No. | 628 | 564 | 64 | | 11.8 | 2,276,188 | 1,824,044 | 452,144 | | | 24.8 | 3,624 | 3,234 | 390 | 12.9 | | |
| Central Iowa | 244 | 194 | 50 | | 26.3 | 958,596 | 767,789 | 188,807 | | | 24.5 | 3,920 | 3,357 | | 37 | 0.9 | |
| Central Pacific | 2,977 | 2,680 | 317 | | 11.4 | 21,466,176 | 19,570,949 | 1,895,227 | | | 9.7 | 7,211 | 7,138 | | 147 | 2.0 | |
| Ches. & Ohio | 487 | 435 | 52 | | 11.9 | 2,777,461 | 2,367,616 | 509,845 | | | 22.4 | 5,703 | 5,213 | 490 | | 9.4 | |
| Chi. & Alton | 847 | 841 | 6 | | 0.7 | 6,686,290 | 6,238,547 | 447,743 | | | 7.2 | 7,894 | 7,418 | 476 | | 6.4 | |
| Chi. & Eastern Ill. | 233 | 221 | 12 | | 5.3 | 1,475,232 | 1,349,865 | 125,367 | | | 9.3 | 6,331 | 6,108 | 223 | | 3.7 | |
| Chi. & Gd. Trunk | 335 | 335 | | | | 1,754,122 | 1,242,781 | 511,341 | | | 41.2 | 5,236 | 3,710 | 1,526 | | 41.2 | |
| Chi., Mil. & St. Paul. | 4,270 | 3,812 | 458 | | 12.1 | 16,351,000 | 13,601,590 | 2,749,410 | | | 20.2 | 3,829 | 3,568 | 261 | | 7.2 | |
| Chi. & Northwestern | 3,369 | 2,828 | 481 | | 17.1 | 19,864,107 | 17,974,094 | 1,889,413 | | | 11.1 | 6,003 | 6,356 | 353 | | 5.5 | |
| Chi., St. P., Minn. & O. | 1,045 | 953 | 92 | | 9.7 | 4,080,067 | 3,196,425 | 883,642 | | | 27.6 | 3,904 | 3,354 | 550 | | 16.2 | |
| Chic. & West Mich. | 370 | 367 | 3 | | 0.8 | 1,238,048 | 1,088,534 | 150,114 | | | 13.8 | 3,348 | 2,966 | 382 | | 12.9 | |
| Cin., Ind., St. L. & Chi. | 371 | 339 | 41 | | 12.4 | 2,197,797 | 1,988,549 | 209,248 | | | 10.5 | 5,924 | 5,411 | | | 10.2 | |
| Cin. N. O. & Tex. Pac. | 336 | 336 | | | | 2,085,257 | 1,895,513 | 189,744 | | | 10.0 | 6,206 | 5,641 | 565 | | 10.0 | |
| Cleve. Akron & Col. | 144 | 144 | | | | 432,328 | 347,725 | 84,603 | | | 21.5 | 2,933 | 2,415 | 518 | | 21.5 | |
| Col. Hock'g Vy. & Tol | 320 | 320 | | | | 2,366,680 | 1,948,205 | 418,475 | | | 21.4 | 7,396 | 6,088 | 1,308 | | 21.4 | |
| Denver & Rio Grande | 1,088 | 752 | 336 | | 44.8 | 5,566,152 | 4,996,567 | 569,585 | | | 11.3 | 5,116 | 6,644 | 1,528 | | 23.2 | |
| Des M. & Ft. Dodge. | 91 | 84 | 7 | | 8.3 | 286,756 | 330,982 | | | | 13.4 | 3,151 | 3,040 | | | 789 | 20.2 |
| Det. Lan. & N. | 226 | 226 | | | | 1,327,889 | 1,133,565 | 194,324 | | | 17.0 | 5,875 | 5,016 | 859 | | 17.0 | |
| Flint & Pere Marq. | 345 | 318 | 27 | | 8.5 | 1,745,569 | 1,539,878 | 205,691 | | | 13.3 | 5,060 | 4,842 | 218 | | 4.5 | |
| Grand Trunk | 2,322 | 2,213 | 109 | | 4.9 | 13,890,806 | 13,510,749 | 380,057 | | | 2.8 | 5,992 | 6,105 | | | 123 | 2.0 |
| Gulf. Col. & S. F. | 362 | 338 | 24 | | 52.1 | 1,142,869 | 768,693 | 374,176 | | | 48.6 | 3,158 | 2,230 | | | 72 | 42.0 |
| Hannibal & St. Jo. | 291 | 292 | | | | 1,814,125 | 1,867,288 | | 53,163 | | 2.8 | 6,213 | 6,305 | | | 182 | 2.0 |
| Houston, E. & W. Tex. | 104 | 86 | 18 | | 20.9 | 215,345 | 125,399 | 89,946 | | | 71.8 | 2,071 | 1,458 | 613 | | 42.0 | |
| Ill. Cent., Ill. lines | 918 | 918 | | | | 5,792,356 | 5,578,330 | 214,026 | | | 3.8 | 6,310 | 6,077 | 233 | | 3.8 | |
| Iowa lines. | 402 | 402 | | | | 1,589,730 | 1,507,375 | 82,355 | | | 5.5 | 3,955 | 3,749 | 206 | | 5.5 | |
| Ind., Bloom. & West. | 611 | 555 | 56 | | 10.1 | 2,179,465 | 2,094,496 | 84,969 | | | 4.5 | 5,583 | 5,774 | | | 191 | 5.1 |
| Kan. City, Ft. St. & G. | 42 | 309 | 33 | | 10.9 | 1,402,186 | 1,251,123 | 151,063 | | | 12.1 | 4,100 | 4,049 | 51 | | 1.2 | |
| Lake Erie & Western | 386 | 386 | | | | 1,219,355 | 1,160,085 | 59,170 | | | 5.1 | 3,159 | 3,005 | 154 | | 5.1 | |
| Long Island. | 335 | 324 | 11 | | 3.6 | 1,972,377 | 1,696,511 | 275,866 | | | 16.2 | 5,888 | 5,256 | 632 | | 12.5 | |
| Louisville & Nashv. | 2,025 | 1,840 | 185 | | 10.1 | 10,552,731 | 9,125,390 | 1,427,371 | | | 15.7 | 5,211 | 4,959 | 252 | | 5.1 | |
| Mar., Hought. & Ont. | 89 | 88 | 1 | | 1.1 | 1,093,833 | 818,468 | 275,365 | | | 33.7 | 12,090 | 9,301 | 2,789 | | 32.1 | |
| Mil., Lake Sh. & West. | 285 | 251 | 34 | | 13.6 | 731,049 | 500,843 | 230,206 | | | 40.0 | 2,565 | 1,995 | 570 | | 28.6 | |
| Mo. Pacific lines: | | | | | | | | | | | | | | | | | |
| Central Branch | 382 | 300 | 82 | | 27.3 | 747,053 | 801,295 | | 54,242 | | 6.7 | 1,955 | 2,071 | | | 716 | 26.5 |
| Int. & Gt. No. | 775 | 623 | 152 | | 24.4 | 2,570,341 | 2,178,942 | 391,399 | | | 17.9 | 3,316 | 3,497 | | | 181 | 5.2 |
| Mo., Kan. & Tex. | 1,225 | 924 | 301 | | 33.3 | 5,061,488 | 4,405,480 | 656,008 | | | 14.9 | 4,132 | 4,768 | | | 636 | 13.3 |
| Mo. Pacific | 865 | 760 | 105 | | 17.8 | 6,520,266 | 5,520,279 | 999,987 | | | 18.2 | 7,285 | 7,262 | 23 | | 0.3 | |
| St. L., Iron Mt. & So. | 745 | 685 | 60 | | 8.8 | 5,956,357 | 5,940,893 | 15,464 | | | 0.3 | 7,995 | 8,073 | | | 678 | 7.8 |
| Texas & Pacific | 1,036 | 806 | 230 | | 28.7 | 3,882,471 | 3,206,833 | 675,638 | | | 21.3 | 7,458 | 6,970 | | | 231 | 5.8 |
| Nash. & Ohio | 528 | 506 | 22 | | 4.3 | 1,581,025 | 1,841,422 | | 300,397 | | 15.9 | 2,904 | 3,118 | | | 734 | 10.8 |
| Nash., Chatta. & St. L. | 348 | 328 | 20 | | 5.7 | 1,565,359 | 1,750,072 | | 184,713 | | 10.5 | 4,498 | 5,029 | | | 531 | 10.5 |
| N. Y. & New England | 306 | 328 | 22 | | 20.7 | 2,850,930 | 2,329,115 | 521,815 | | | 22.0 | 7,199 | 7,101 | 98 | | 1.4 | |
| Norfolk & Western | 428 | 428 | | | | 1,943,747 | 1,832,595 | 111,152 | | | 6.1 | 4,541 | 4,282 | 259 | | 6.1 | |
| Northern Central | 326 | 326 | | | | 4,971,502 | 4,479,916 | 491,586 | | | 10.9 | 15,250 | 13,749 | 1,501 | | 10.9 | |
| Northern Pacific | 1,168 | 784 | 384 | | 49.0 | 5,704,758 | 3,244,888 | 2,459,870 | | | 75.8 | 4,884 | 4,139 | 745 | | 19.2 | |
| Ohio Central | 232 | 232 | | | | 859,401 | 540,045 | 319,356 | | | 59.1 | 3,704 | 2,328 | 1,376 | | 59.1 | |
| Pennsylvania | 1,944 | 1,900 | 44 | | 2.3 | 40,548,834 | 36,552,212 | 3,996,622 | | | 10.9 | 20,858 | 19,339 | 1,519 | | 8.5 | |
| Peoria, Dec. & Evans | 254 | 231 | 23 | | 9.9 | 651,819 | 569,446 | 82,373 | | | 14.5 | 2,566 | 2,465 | 101 | | 5.1 | |
| Phila. & Reading | 995 | 994 | 1 | | 0.1 | 15,783,452 | 14,963,749 | 819,713 | | | 5.5 | 15,863 | 15,054 | 809 | | 4.4 | |
| Rich. & Danville | 757 | 757 | | | | 1,972,550 | 2,828,193 | 144,357 | | | 5.1 | 3,927 | 3,736 | 191 | | 5.1 | |
| St. L., Alt. & T. H. | | | | | | | | | | | | | | | | | |
| Main Line | 195 | 195 | | | | 1,127,466 | 1,222,362 | | 94,896 | | 7.8 | 5,782 | 6,289 | | | 487 | 7.8 |
| Belleville Line | 121 | 121 | | | | 715,610 | 617,543 | 98,067 | | | 15.8 | 5,914 | 5,104 | 810 | | 15.8 | |
| St. L. & Cairo | 146 | 146 | | | | 309,303 | 350,080 | | 40,777 | | 11.6 | 2,118 | 2,398 | | | 290 | 11.6 |
| St. L. & San Francisco | 660 | 617 | 43 | | 7.1 | 2,911,897 | 2,588,010 | 323,887 | | | 18.0 | 2,099 | 1,901 | | | 198 | 10.4 |
| St. P. & Duluth | 175 | 175 | | | | 887,134 | 578,800 | 308,334 | | | 53.2 | 5,089 | 3,307 | 1,782 | | 53.2 | |
| St. P., Minn. & Manitoba | 970 | 783 | 187 | | 23.8 | 7,097,921 | 3,842,167 | 3,255,754 | | | 84.7 | 7,317 | 4,907 | 2,410 | | 48.3 | |
| Scioto Valley | 128 | 115 | 13 | | 11.3 | 446,988 | 359,352 | 87,636 | | | 24.4 | 3,492 | 3,125 | 367 | | 11.8 | |
| South Carolina | 243 | 243 | | | | 1,013,055 | 984,917 | 28,138 | | | 2.9 | 4,109 | 4,053 | 56 | | 2.9 | |
| Tol., Cin. & St. L. | 451 | 360 | 91 | | 25.3 | 777,897 | 561,895 | 216,002 | | | 28.6 | 1,725 | 1,561 | 164 | | 10.5 | |
| Union Pacific | 3,728 | 3,422 | 306 | | 9.0 | 24,269,556 | 22,142,546 | 2,127,010 | | | 9.6 | 5,610 | 6,476 | 34 | | 0.5 | |
| Va. Midland | 352 | 352 | | | | 1,177,588 | 1,094,623 | 83,965 | | | 7.6 | 3,345 | 3,110 | 235 | | 7.6 | |
| Wab., St. L. & Pac. | 3,365 | 2,640 | 725 | | 27.5 | 11,880,690 | 11,789,694 | 2,091,026 | | | 17.7 | 7,125 | 5,466 | 341 | | 7.6 | |
| Wisconsin Central | 481 | 481 | | | | 1,301,684 | 977,430 | 324,234 | | | 33.2 | 2,706 | 2,032 | 674 | | 33.2 | |
| Total, 65 roads | 51,905 | 46,338 | 5,567 | | 12.0 | 311,838,379 | 274,449,276 | 38,151,517 | 772,414 | | 13.6 | 6,008 | 5,923 | 85 | | 1.1 | |
| Total Inc. or dec. | | | 5,567 | | | | | 37,389,103 | | | | | | 85 | | | |



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EDITORIAL ANNOUNCEMENTS.

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Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subject pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN OPINIONS, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

THE ST. PAUL RAILROAD WAR AND ITS EFFECT ON STOCKS.

There has been a very general misconception of the extent of the traffic affected by the contest over St. Paul traffic. There had been no agreement regarding east-bound passengers from St. Paul and Minneapolis (and when we say St. Paul we mean Minneapolis too, the two forming one traffic centre), which would prevent reduction in rates, and rates on these were irregular for some time previous to last week. There was a pool between the Milwaukee & St. Paul and the St. Paul & Omaha regarding freight traffic east, which could be dissolved on 30 days' notice by either party, and the St. Paul & Omaha gave the requisite notice, which left the roads free to act independently Nov. 19, and then east-bound rates were reduced on freight from St. Paul and Minneapolis.

On west-bound traffic the pool was made by the Chicago & Northwestern and the Milwaukee & St. Paul, and the St. Paul & Omaha cannot make the rates in that direction to St. Paul, and the Northwestern has been unwilling to reduce them. But west of the Mississippi the St. Paul & Omaha has been able to make rates in both directions, and has reduced them on all freight and passengers to and from St. Paul and points where it competes with the Milwaukee & St. Paul—as at Mankato, Sheldon, Sioux City and several other small places; and as the Rock Island working over the Burlington, Cedar Rapids & Northern and the Minneapolis & St. Louis made similar reductions, at the crossings of the Milwaukee & St. Paul, these extended to Cedar Rapids, Albert Lea, and several other points in Northern Iowa and Southern Minnesota. All this could be done without violating the agreement to maintain rates from Chicago to St. Paul and between Chicago and Omaha, as could the reduction in the passenger rate from Chicago to Rock Island, the most important local point on the Rock Island road (as Davenport and Moline are both close at hand.) Indirectly the rates to these points affect the traffic to Omaha and St. Paul. Sioux City is a wholesaling point, and if its merchants have a great advantage in freight rates they will be able to supply some places and merchants who otherwise would get stocks at St. Paul or Omaha or directly at Chicago.

The recently formed line between Chicago and Omaha by the Illinois Central and the St. Paul & Omaha has enabled the latter company to cut the rate from Omaha to Chicago, and so make the Illinois Central, which works the eastern four-fifths of the line (530 out of 657 miles), help fight its battles. The Illinois Central, having no interest in the war, does not make a similar reduction on west-bound freight; but it must be remembered that all traffic is taken at less than the regular rates by this long route, which indeed, has not much value to either of the lines forming it except as artillery to be used against the enemy—often, as things go, a very useful purpose.

It is therefore true that Omaha rates are cut and

St. Paul rates are cut, and that rates are cut to Northwestern points between the two; but those who accept these statements as affirmations that all the traffic between Lake Michigan and the places west of the Mississippi as far south as Omaha is carried at the war rates are woefully mistaken. Probably not one-tenth, possibly not one-twentieth, of the total traffic between Chicago and Omaha is affected, and not a very large fraction of the other traffic south of St. Paul and Minneapolis. The waste is serious enough, but it is enormously exaggerated by speculators. The fall in the prices of the stocks of roads west of Chicago and east of the Missouri alone, from Saturday, Nov. 18 (when prices had already fallen considerably because a contest was feared), to Saturday, Nov. 25, was 18 millions of dollars; and the aggregate net earnings of all roads involved to any extent worth considering in the war—the Rock Island, the Chicago & Northwestern, the Milwaukee & St. Paul, the St. Paul & Omaha, the Burlington, Cedar Rapids & Northern and the Minneapolis & St. Louis—were less than \$27,000,000 last year, when they were larger than ever before. The aggregate dividends of these roads at the rates recently paid by them will amount to less than \$9,000,000 on their present capital stock. The fall in prices of the stocks of these companies alone is very near this amount, as if it were supposed that the war was likely to destroy the entire surplus available for dividends.

The fall in prices given above, however, does not represent the whole amount. Not to speak of calculating it only from Nov. 18, when the expectation of the railroad war had already had considerable effect, the reduction we have given is only to the closing prices of last Saturday, which were the highest of the day. At the lowest prices of Saturday, the value of the stocks was \$10,000,000 less, or \$28,000,000 less than by the prices one week before. If any explanation were needed why railroad shares are not a favorite investment for small capitalists (and for many large capitalists, including nearly all Europeans) we have it here. The average reduction in price in this one week, in which nothing had happened to affect the values of the properties except a dispute among managers, was fully 8 per cent. A man who depends upon the interest of his capital for his income dares not invest it largely in such property.

Of course, however, the fall in prices has not been due to a close calculation of the loss which the war would cause, but to an estimate of the effect it would have upon shareholders. Men who believed their stocks not to have suffered in value 1 per cent. sold because they knew that in the wild excitement among speculators who know next to nothing of the value of the properties they deal in and of the effect of changes of rates on different parts of their traffic, prices would go much lower. How absurd the movement becomes may be judged by the fact that on the report that rates were cut from Omaha to Chicago over the Illinois Central, there was a fall in the price of that stock equal to a whole year's dividend, though this road has never had any Omaha traffic previous to November, and would not lose \$20,000 by a railroad war at Omaha lasting a year. So Missouri Pacific, which by an extension of the war on all Omaha traffic even would suffer comparatively but a trifle, sold last Saturday (when highest) at a price that made the stock worth \$2,850,000 less than the week before. And Chicago, Burlington & Quincy, at the lowest price of Saturday, was worth \$6,000,000 less than the week before, while, if the war is not extended, and should last for a year, it would probably not lose \$100,000 by it.

But we need not go to these Western roads to show how unreasonable have been the effects on the stock market of a railroad war over the St. Paul traffic. Trunk-line stocks have suffered almost as much as Northwestern stocks, when if the railroad war west of Chicago has any effect on them it will be to benefit them. They will get as high rates as ever, and for a time will have more to carry. The Minnesotan who wanted to make a visit to the East, but thought he could not afford to when he had to pay \$32.50 for a ticket from St. Paul to New York, may not hesitate now that he can get one for \$20.50. The farmers may hurry forward their wheat in time for the railroads to get 18 cents a bushel for carrying it from Chicago to New York, instead of waiting till the end of winter, when it would probably go forward by lake, or if by rail, at a lower rate. The trunk lines profit by a railroad war in the Northwest just as the Northwestern roads profited last year by the war of the trunk lines. But the stock market says that Lake Shore was worth \$2,000,000 less last Saturday than one week before, and similarly deducted something more than that amount from its valuation of New York Central.

Of course the St. Paul railroad war was rather the occasion than the cause of the break in prices. It frightened people, led them to remember what dis-

asters have happened, to question whether there is not some threatening weakness in the economic situation. Then those interested in knocking down prices took the occasion of every circumstance that indicated less activity in any branch of business, especially the temporary closing of some Bessemer works, which, having been enlarged sufficiently to supply the country when it consumes 2,200,000 tons of rails a year (as it probably will this year), will not be able to keep busy all the time when the consumption falls to 1,600,000 tons a year, which will probably be as much as our average consumption until the country has grown a great deal. A few hundred thousand tons of anthracite coal are used in the Bessemer industry (most of the works using no anthracite), and thus the possible closing of some of these works for a time was used as a reason why the shares of the anthracite coal roads should sell at lower prices. The price may have been too high, but if so the consumption in steel-making had next to nothing to do with it. Traffic generally is good and likely to be so for months at least. We have been building too many railroads, as we have insisted for more than two years, and some of the old roads will suffer and some of them will profit thereby. The great loss by such an over-production of roads is by the withdrawal of capital from productive enterprises, which will affect the whole community; but the first sign of distress we should look for in this matter is a great tightening of the money market all over the country. This we have not had, and there seem to be no signs of it at present. We have not waited, as in 1873, until it was impossible to get money before checking this work of new construction; while so far this year we have laid track at a rate never known before in this or any other country, we have not been preparing to continue the work at this rate. We have pointed out from time to time that the great fall in the price of rails (nearly one-third since January) and the smaller importations and the reduced demand for rolling stock indicated that there would soon be a falling off in railroad construction, and we have looked upon this as the most favorable sign of the times. We could not possibly keep on building at the rate of this year—fully a thousand miles a month—without encountering great financial disaster. Many interests of course must suffer if we reduce the rate of construction greatly. Works prepared to maintain the rails and stocks of cars, locomotives, etc., of our railroads, and in addition supply the materials for 12,000 miles of railroad a year, cannot be fully employed if we build but 4,000 or 5,000 miles a year, which is all we ought to build; but this will be much better than a great financial crash, which would make most industries stagnant for a year or two or three. The industries of the country at large and the railroads especially will be very much better off if we stop building railroads at the rate of the last two years, and it is a good omen that we have been preparing to stop before we were forced to by the impossibility of getting money.

THE NEW YORK, LAKE ERIE & WESTERN REPORT.

The fiscal year for which this report is made, ending with September last, was the worst for trunk-line traffic since 1876-77. The traffic was greatly reduced by the crop failure of 1881, and the value of it was totally destroyed much of the time by the low rates of the railroad war. It will be understood that we mean, by trunk-line traffic, the business for which the trunk-lines compete. The local traffic of some of them—perhaps all of them—was better in the year under consideration than ever before.

The war rates on east-bound freight, that began in June of last year, virtually lasted till March, by which time the great staples of Western traffic had been marketed to an extent never before known so long before harvest. The advance in rates made after the settlement of the railroad war was to a lower figure than had been made regularly before, but aside from this the earnings of the trunk lines were reduced for months afterwards by the payment of rebates which accrued on shipments during the war, but were not payable until afterwards—the completion of some yearly contract or the like. In this way earnings were very considerably reduced as late as September, so that we may say that earnings were affected by the railroad war throughout the Erie's last fiscal year. West-bound rates were nominally restored at the same time as east-bound, but very nearly the whole of this traffic was contracted at the lowest of war rates until July, and here again bills for rebates have been coming in nearly ever since.

The through passenger travel was spoiled nearly half of the year by rates previously unheard of.

So far as through rates are concerned, therefore, the year ending with September last was favorable to a very heavy through traffic, both freight and passenger, small earnings, and very small profits. Fortunately for themselves, however, besides a great through traffic, for which they compete with each other, the trunk lines have an enormous local traffic, not much affected by the through rates; and the year in question was one of great activity in the coal and iron industries and in many manufactures.

The report of the New York, Lake Erie & Western shows its traffic to have been as follows:

| | 1881-82. | 1880-81. | Increase. | P. c. |
|------------------------|-----------|-----------|-----------|-------|
| Tons coal..... | 6,104,572 | 5,518,850 | 585,722 | 10.6 |
| Tons freight..... | 5,790,566 | 5,567,973 | 222,593 | 4.0 |
| No. of passengers..... | 6,784,195 | 6,144,158 | 640,037 | 10.4 |

These figures are not very important except in connection with those giving the mileage below. We find a large increase in the number of passengers and of tons of coal; a small one in other freight. The coal tonnage was greater than that of all other freight. The passenger and tonnage mileage was:

| | 1881-82. | 1880-81. | Increase. | P. c. |
|--------------------|---------------|---------------|------------|-------|
| Ton miles..... | 611,076,125 | 574,533,237 | 36,542,888 | 6.4 |
| Other freight..... | 1,343,313,585 | 1,409,861,618 | 66,548,033 | 4.7 |

| | | | | |
|------------------|---------------|---------------|-----------------|------|
| Total..... | 1,954,389,710 | 1,984,394,855 | Dec. 30,005,145 | 1.5 |
| Pass. miles..... | 225,130,083 | 200,483,790 | Inc. 24,646,293 | 12.3 |

This tells a somewhat different story. While coal made up 56 per cent. of the number of tons, it made but 31.3 per cent. of the tonnage mileage last year; and, owing to the shorter average haul, the increase in coal mileage was but 6.4 per cent., while the increase in tons was 10.6; and instead of the increase of 4 per cent. in the tonnage of other freight, there was a decrease of 4.7 per cent. in ton miles. On the other hand, the very low through passenger rates evidently increased the proportion of through travel, and the increase in passenger mileage is therefore greater than that in the number of passengers.

The coal was not among the traffic affected by the railroad war last year, yet we see that there was a slight decrease in the other freight while there was an increase in coal.

The traffic of the year was carried with a less train mileage than before, due to larger average train loads.

The average freight-train load increased from 218 to 228 tons, the average passenger-train load from 58 to 63. The increase of 12½ per cent. in passenger traffic was made with an increase of only 2 per cent. in passenger train mileage; the decrease of 1½ per cent. in freight traffic was accompanied by a decrease of 5.9 per cent. in freight-train mileage. The economy by these larger trains must have been considerable.

The passenger traffic increased so much that in spite of a decrease of 3.4 per cent. in the average rate, the passenger earnings were 8½ per cent. greater than the year before. But besides the small decrease of 1½ per cent. in the total freight traffic there was a decrease of 7 per cent. in the average freight rate, resulting in a decrease of 8½ per cent. (\$1,337,448) in freight earnings. All this and more was in the general freights, as there was a small increase in the earnings from coal. There was a decrease of 4.4 per cent. in the coal rate, but in the rate on other freight the decrease was 8½ per cent.—probably wholly due to the railroad war.

The traffic of this road for ten consecutive years has been:

| Year. | Pass. miles. | Ton-miles. | Train-miles. |
|--------------|--------------|---------------|--------------|
| 1872-73..... | 164,633,424 | 1,032,986,809 | 3,456,965 |
| 1873-74..... | 169,204,123 | 1,017,420,238 | 3,250,941 |
| 1874-75..... | 155,306,804 | 1,016,618,050 | 3,202,392 |
| 1875-76..... | 163,674,795 | 1,040,431,921 | 3,201,005 |
| 1876-77..... | 170,888,580 | 1,114,586,220 | 2,988,298 |
| 1877-78..... | 140,326,749 | 1,224,763,718 | 3,032,717 |
| 1878-79..... | 149,115,718 | 1,569,222,417 | 3,192,618 |
| 1879-80..... | 180,460,204 | 1,721,112,095 | 3,280,456 |
| 1880-81..... | 200,483,790 | 1,984,394,855 | 3,476,629 |
| 1881-82..... | 225,130,083 | 1,954,389,710 | 3,546,035 |

*Switching trains included in these years.

Thus the passenger traffic last year was 50 per cent. greater than in 1878-79, and the freight traffic, though a little less than the year before, is 23½ per cent. more than in 1878-80, and about 90 per cent. greater than in 1875-76. The 50 per cent. increase of passenger traffic since 1879 has been carried with an increase of but 11 per cent. in passenger-train mileage, and the increase of 25 per cent. in freight since the same year was carried with an increase of 1.2 per cent. in mileage of freight trains. To this ability to move more traffic per train is largely due the greater prosperity of the company. In 1875 the average freight train load was but 133.7 tons; in 1878, 160 tons; in 1880, 210½ tons; in 1882, 223 tons.

The increase has been due partly to the use of more powerful locomotives and improvement of road, but more, probably, to the large increase of west-bound freight (chiefly coal) which has given loads to cars that formerly would have gone west empty. This road has now become one of the most important of the coal carriers, exceeded only by the Reading and the Pennsylvania in the number of tons hauled, and this traffic, moreover, is one that tends to increase faster than the other freights. Thus for the five successive years that

the coal traffic has been reported separately the ton-miles of this and other freight have been:

| Year. | Coal. | Other freight. | Total. | P. c. |
|--------------|-------------|----------------|---------------|-------|
| 1877-78..... | 267,344,580 | 957,419,138 | 1,224,763,718 | 21.8 |
| 1878-79..... | 500,436,551 | 1,068,785,866 | 1,569,222,417 | 39.9 |
| 1879-80..... | 432,329,839 | 1,288,782,256 | 1,721,112,095 | 25.1 |
| 1880-81..... | 574,533,237 | 1,409,861,618 | 1,984,394,855 | 28.9 |
| 1881-82..... | 611,076,125 | 1,343,313,588 | 1,954,389,710 | 31.3 |

The great importance of this traffic has been that of late years the rates on it have been maintained when other trunk-line freights were reduced below cost. Last year the average rate on coal was 0.808 cent, on other freight 0.722 cent. In 1880-81 even, during most of which through freight rates were maintained, the coal rate was 0.845 cent against 0.789 cent on other freight. It is true that the average hauls on coal are much the shorter (coal 101 miles last year; other freight 322), but the expenses attending the carriage of coal is so much lower that the profit on it should be considerably greater. As a fact, 33½ per cent. of the gross freight earnings of the last year were from coal, and even if we count the expense for coal as great as for other freight, to it was due about 40 per cent. of the net earnings on freight. The vast importance of this freight is therefore evident. That it is appreciated by the company's officers is evident from the President's report, which is largely taken up with the plans, contracts and new constructions by which this road will secure to itself the whole of the Lehigh Valley coal shipments west and the whole of the Pennsylvania Coal Company's shipments east and west, the more economical conduct of the coal traffic, and the development of the company's own coal properties—arrangements which seem to assure to the road a still larger and a permanent increase in this traffic.

The average rates of the road were reduced on both passenger and freight last year by the railroad war. The passenger rate fell to 1.947 cents, which is smaller than in any previous year since 1876-77. The average freight rate, which had increased from 0.780 to 0.836 cent per ton per mile from 1879 to 1880, and fell to 0.805 cents in 1881, was reduced further to 0.749 cent last year, and was smaller than ever before. There was a considerable decrease in the average cost per passenger mile, so that the profit was a little larger than 1880-81, in spite of the fall in the rate. But the decrease in the cost per ton per mile was trifling (from 0.529 to 0.526 cent per mile, and the profit fell from 0.302 cent in 1880 and 0.276 in 1881 to 0.223 in 1882. This decrease from 1881 in the average profit made a difference of more than a million dollars in the net earnings of the company.

The changes in earnings are much less than might naturally have been expected in a year of so long and violent a railroad war. They decreased but 3.6 per cent., and as working expenses were reduced 1.3 per cent., the decrease in net earnings was but \$571,695, or 7.7 per cent. It was the coal traffic chiefly which prevented a greater loss, aided by a large and profitable passenger traffic in the last half of the year.

In working expenses there was a decrease of 1.6 per cent. for conducting transportation; 5.7 per cent. for motive power; 4.9 per cent. for maintenance of wages and 0.5 per cent. for maintenance of cars, while there was an increase of 30.9 per cent. in general expenses. As there was a decrease of 3.9 per cent. in train mileage the decrease of 1.6 per cent. in working expenses does not appear unreasonable.

After paying interest, rentals, etc., there remained a surplus from net earnings of \$1,166,642, against \$1,887,418 the year before—a decrease of \$720,776, or 38 per cent., and about 94 cents per share of common stock. The interest on the income bonds and a 6 per cent. dividend on the preferred stock are ordered to be paid, and there will remain a surplus of about \$671,000, which has chiefly been expended for improvements.

The excess of net earnings over fixed charges in successive years since the reorganization has been:

| 1877-78. | 1878-79. | 1879-80. | 1880-81. | 1881-82. |
|-----------|-------------|-------------|-------------|-------------|
| \$625,432 | \$1,231,971 | \$1,790,021 | \$1,887,418 | \$1,166,642 |

The surplus was thus smaller last year than in any other since the first. An increase of \$188,146 in interest and rentals had something to do with this. The interest on the debt under the terms of the reorganization has now reached its maximum, but there were some additions to the debt last year, which somewhat increase the yearly interest charge.

Every year since the organization, however, the surplus as given above has been in excess of the interest on the income bonds and the 6 per cent. dividend on the preferred stock, and in every year but one it has been twice as great.

The very important information in the President's report regarding the new connections and contracts with other roads which the company has made during the past year we publish in full with our abstract of the report.

The connections so secured, it seems to us, strengthen the company more than anything done heretofore since the reorganization. A year ago the company, with all its enormous traffic, commanded no connection with except by its steamboat line, that is, it possessed connections on sufferance, as it were, and could not be certain that it would not lose them. It had just been kicked off (so to speak) the Lake Shore, the Michigan Central and the Cleveland, Columbus, Cincinnati & Indianapolis, and had its connection with Cincinnati endangered. It carried an enormous anthracite coal traffic, nearly all of which was delivered to it by independent roads or companies, which were free to close contracts with other lines, which could be made to serve them about as well.

This year Mr. Jewett reports a permanent connection with Chicago secured by a contract which is not likely to call for any payment of money by his company at any time, the President of the Erie having an irrevocable proxy to vote on 90 per cent. of the stock for 30 years, and a contract being made which requires the Chicago road to work for the Erie exclusively, and the New York, Pennsylvania & Ohio to serve as a connecting link. The control of the Cincinnati, Hamilton & Dayton was secured by an arrangement with the stockholders which requires the Erie to assume a charge of \$90,000 a year in case the Cincinnati company does not pay a 6 per cent. dividend. The company's coal property in Pennsylvania is made available by the extension of the Bradford Branch 30 miles, a contract with the Pennsylvania for the use of 35 miles of its road, and a 12 mile branch thence to the mines, which will afford bituminous coal for the company's own use, and for coking and sale, and at the same time will give the Erie a connection with Pittsburgh, one of the most important traffic centres in the country. The whole stock of the Blossburg Coal Company (covering railroads as well as mines) was bought for \$2,000,000 by a bargain which enabled the Erie to turn in that white elephant, the Grand Opera House, at a valuation of \$715,000—giving 66 miles of railroad and 28,000 acres of coal lands now producing 400,000 tons of coal yearly; a contract with the Lehigh Valley Railroad gives the Erie the whole of its west-bound coal traffic for ten years; a contract with the Pennsylvania Coal Company secures it the whole of that company's traffic east and west, and by the use of its road, reconstructed for the purpose, and perhaps some new road, it will save 100 miles of the hauling of empty cars going to the mines for loads, for this and the Delaware & Hudson Canal coal.

Of course we cannot affirm that none of these arrangements will not cost more than they are worth, as in most cases the terms of the contract are not given; but they certainly have put the New York, Lake Erie & Western in a position to command traffic such as it has never held before, and assure it control of an immense traffic, especially in coal, which has recently been its most profitable traffic.

Effect of War Rates on Traffic.

It is always interesting to watch the effect of a reduction of transportation rates on traffic; but it is not often possible to trace it with any degree of accuracy. The first effect of a great temporary reduction on passenger traffic is always an enormous increase of it; but if the low rates are kept up for some time, the travel soon falls off, though of course not to its former figures. For months a rate of a dollar or fifty cents has been maintained between St. Louis and Kansas City, but after the first two or three weeks we learn that the travel fell off greatly, and was not so very much greater than before the reduction. We have no definite statistics, however, which would be very valuable. As by low rates on freight a man's income may be materially increased, we might expect shipments to be greatly stimulated by them, especially when they are not expected to be permanent. Yet no doubt their effect is greatly exaggerated in the popular estimation, and partly because of the results of trunk-line railroad wars. These lines, however, do not, when they carry for less than cost, increase their traffic so much by an increase in the aggregate amount of the freight movement, as by the diversion of it from cheap water routes and round-about rail routes. When rail rates are so low that the vessels cannot carry in competition with them, then the trunk lines get all the lake and canal and river business, and gain in their traffic, though there may be a decrease in the aggregate traffic, as there often has been during railroad wars—as there was in grain in 1876, and again in 1881, during the longest and severest railroad wars, it so happening that in those years there was less grain than usual in the country for any one to carry.

Complete statistics of the traffic during the numer-

ous railroad wars of the Southwestern Association and that among the Northwestern roads would be much more significant, for these roads carry substantially the whole of the traffic of the country which they serve. Lacking these, we use the existing statistics of the traffic which is most affected by the war of Northwestern railroads. This traffic is the grain and flour receipts of Chicago and Milwaukee, to which places rates were reduced 50 per cent. or more after Saturday, Nov. 18.

The grain receipts (not including flour) of these places for six successive weeks have been, in bushels:

| | | Week to | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| | | Oct. 21. | Oct. 28. | Nov. 4. | Nov. 11. | Nov. 18. | Nov. 25. |
| Chicago | 1,850,923 | 2,909,801 | 3,737,112 | 2,608,955 | 1,935,911 | 2,190,391 | |
| Milwaukee | 483,401 | 565,245 | 529,004 | 597,770 | 630,017 | 445,376 | |
| Both | 2,334,324 | 3,475,046 | 4,266,116 | 3,136,734 | 2,465,928 | 2,635,767 | |

Thus the receipts of the two places which get the whole advantage of the war rates from Minneapolis and other northwestern points are but 140,000 bushels (5½ per cent.) more in the first week of the low rates than in the week before, when rates were twice as high, and smaller than for three weeks previous. Evidently there is no such stimulating effect in low rates on grain as some seem to think. It is true that the shipments of the last day or two of last week did not arrive in time to be reported in the receipts of the lake cities for that week; but, on the other hand, the low rates had been expected, and it is reasonable to suppose that shipments were held back somewhat to get the advantage of them.

It should be said that a much larger proportion of Milwaukee's receipts than of Chicago's receipts are from the places and the district from which war rates are made. But Milwaukee's grain receipts we see were smaller in the first week of the railroad war than in any of the five weeks previous.

Of course the receipts of Chicago and Milwaukee are not entirely from Minneapolis and the district which has the low rates. And, indeed, they do not receive large amounts of any grain from it except wheat and flour. A comparison of these may indicate the effect of the railroad war on the grain movement more accurately than the above comparison of the receipts of all grain, not excluding flour, especially as the great Minneapolis mills are in the best position to take immediate advantage of the rates. We, therefore, compare below the receipts of wheat and flour at Chicago and Milwaukee for the week ending Nov. 25 (the first of the railroad war) with those of the week ending Nov. 11, when the movement was less affected by the expectation of a railroad war than in the week before it actually began:

| | | Week to | | | | | |
|------------------------------------|-----------|-----------|------------|--------------|--|-------|--|
| | | Nov. 25. | Nov. 11. | | | | |
| Flour, bbls. | | 132,402 | 134,802 | Inc. or Dec. | | P. c. | |
| Chicago | 112,080 | 108,322 | I. 4,367 | | | 4.0 | |
| Milwaukee | | | | | | | |
| Both | 245,091 | 243,124 | I. 1,967 | | | 0.8 | |
| Wheat, bus. | | | | | | | |
| Chicago | 549,536 | 840,121 | D. 290,585 | | | 34.6 | |
| Milwaukee | 218,642 | 204,157 | I. 14,485 | | | 7.1 | |
| Both | 768,178 | 1,044,278 | D. 276,100 | | | 26.4 | |
| Both places, wheat and flour, bus. | 1,871,087 | 2,138,336 | D. 267,249 | | | 12.5 | |

Thus, if we take wheat and flour together, we find that in the first week of the war rates the receipts of the two places were one-eighth less than two weeks before.

Still further to limit the traffic considered to that most affected by the railroad war, we may consider the Milwaukee receipts by themselves. Chicago receives from the whole of the district in which rates have been cut, but it receives wheat largely from a still larger territory further south, and flour to a considerable extent from that district, though chiefly from the Northwest. But Milwaukee, as we have said, receives almost entirely from the district in which the rates are cut whenever the contending roads can get at each other. But even Milwaukee shows an increase in receipts of only 4 per cent. in flour and 7 per cent. in wheat in the first week of the railroad war—an entirely insignificant change, not equal to many others between consecutive weeks without any cause that can be traced.

It would appear then that the reduction of rates, equivalent to five or six cents a bushel, did not in the first week of the railroad war have any appreciable effect in stimulating shipments. The reduction, as we have said elsewhere, does not by any means affect all the places in the general territory where rates are cut at junction points. The grain shipments should be much more affected than anything else, because grain and flour make up probably three-fourths or more of the total east-bound freight of the territory affected.

If the whole of the wheat and flour receipts of Chicago and Milwaukee, last week, had been carried at war rates (probably not one-fourth were), the earnings of the several roads carrying them would have been about \$95,000 less than if they had carried them at full rates. If the whole surplus wheat crop of Minne-

sota and Dakota and the northern half of Iowa should be carried at the war rates, the aggregate receipts of the roads for the transportation would be probably something like \$2,500,000 less than at regular rates.

It should be said that if disposed to take advantage of the advance in prices caused by the railroad war, the farmers could not do so to a very great extent immediately. Most of them, probably, would have to thresh as well as haul to market their wheat. But at this season we should expect stocks to be so large at the various stations that the shipments could be doubled, or trebled or more in the first week. The expectation of an early restoration of rates will be likely to give a greater stimulus to shipments than the original reduction.

Railroad Wars and Prices of Commodities.

The effect of war rates on prices is a subject which is worth investigating. When the cost of transportation is reduced who gets the benefit of the reduction, the producer, the consumer, or the merchant intermediate between them? Doubtless, sometimes one and sometimes the other, and sometimes the amount of reduction is divided among them. When the goods carried have a very extended market—are what the Germans call a "world-merchandise," produced in large quantities in many parts of the world and consumed almost everywhere—then the reduction in the cost of transportation from one comparatively small part of the producing district should have little or no effect on the price to the consumer, for this price is made for him by the aggregate of the world's supply and the world's demand. Of nothing probably is this truer than of grain, and most of all of wheat and flour. The price of wheat in New York, Liverpool, Marseilles, Odessa and Bombay is affected by the production of Chili and Australia, of Hungary and California, of India and Dakota, and the cost of transportation thence to the consumers. But the production of a single one of these countries or districts has comparatively little effect on the price to the consumer. With an aggregate consumption of 2,000 millions of bushels say, what difference will it make whether Dakota produce 10 millions or 20 millions? And still less difference does a change in the cost of transportation make. The St. Paul railroad war if kept up for a year within its present limits would affect the cost of transportation of perhaps 35,000,000 bushels of wheat, or the flour made from it, the average cost of transportation of which to Chicago, with rates fully maintained, would be probably 12 to 15 cents a bushel. If it should all be carried for nothing, the reduction in cost of the world's crop delivered to the consumer would be but a small fraction of a cent a bushel. Therefore we should not expect the consumer to get any of the benefit from the low rate northwest of Chicago, but that the producer and the merchant would get the whole profit of the reduction in the price for carrying. And this should be shown by the Chicago and Milwaukee prices. These places, and especially Chicago, receive nearly all the wheat from the places affected by the railroad war and a great deal more from other places. If the consumer were to get any of the advantage of the lower rate, it should be seen in lower prices of wheat at Chicago. Actually the quotations there a week before the grain and flour rates from St. Paul to Chicago were reduced, the day before, and the fourth day of the low rates were:

| | | Common to fancy | | Minnesota patents. | | Wheat. No. 2 | |
|---------|-------|-----------------|--|--------------------|--|--------------|--------|
| | | | | | | | |
| Nov. 13 | ..... | \$4 to \$6 | | \$6.50 to \$7.25 | | 91¼ to 92¼ | cents. |
| Nov. 18 | ..... | 4 to 6 | | 6.50 to 7.25 | | 93 to 93¼ | " |
| Nov. 24 | ..... | 4 to 6 | | 6.50 to 7.25 | | 92¼ to 93¼ | " |

These fluctuations are less than those frequently occurring in a single day. In flour there have been no changes of price at all, and by far the larger part of the surplus wheat of Minnesota and Dakota (when it is good, as this year), reaches the lakes in the shape of flour. We may safely say, then, that the cut rates have not affected Chicago prices, or the cost of bread to the consumer, and that therefore the whole benefit must have been reaped by the farmers or the wheat buyers and millers west of the Mississippi, and this will make the railroad war very popular with them. But so far, doubtless, nearly the whole benefit of the low rates has been reaped by the millers and the grain-buyers, who are the only ones having a great accumulation of stocks on the railroads which they can ship at short notice; and it is the grain buyers chiefly and not the millers that gain this advantage, because the latter usually do not have great accumulations of stocks of flour, nor at this season, of wheat. They consume great quantities of wheat and produce great quantities of flour every day, and it takes a great capital to hold stocks for many days. Generally they need to receive and to ship about as fast as they grind, taking care to insure a stock of wheat on hand sufficient to keep them busy. The farmer cannot market his grain all at once, or at any time, but must do it slowly, and at this season he may lose important time for plowing if he uses his team for carrying grain to market; though very soon he may be able (in the country where there is little corn to pick, as north of Iowa) to give pretty much his whole time to threshing and marketing.

The whole effect of the reduction, we have said, should be seen in St. Paul and Minneapolis prices. Below we show the actual changes in the quotations on days before and after the reduction of rates:

| | | Wheat | | Flour | |
|---------|-------|-------------|--------|---------------|------------|
| | | No. 1 hard. | No. 2. | Patents. | Common. |
| Nov. 15 | ..... | \$1.02 | \$0.75 | \$6 to \$6.50 | \$4 to \$5 |
| Nov. 17 | ..... | 1.03 | 0.98 | " | " |
| Nov. 21 | ..... | 1.07 | 1.00 | " | " |
| Nov. 24 | ..... | 1.05 | 0.99 | 0.94 | " |

The prices on Saturday, the 18th, were the same as on the

17th, and were apparently unaffected by the prospect of a railroad war. Afterwards, with a reduction in the freight to Chicago amounting to 6 cents a bushel on wheat and 20 cents a barrel on flour (or more), the price on different days was 4 cents and 3 cents a bushel higher for wheat; but there was no change in flour. Apparently, then, the millers obtained the whole benefit of the reduction and the grain-buyers about half of the reduction on wheat. The farmer may get two or three cents a bushel more for his wheat than before the railroad war, but inasmuch as changes as great as that are common almost every week, we are hardly safe in assuming that this advance was wholly because of the railroad war.

It is somewhat notable that the country which has recently shown the greatest growth and prosperity is that in which has had fewest railroad wars—namely this very North western territory. There has been a Southwestern railroad war nearly every year, often very fierce and lasting for months, during which Kansas and the other country affected by rates to and from the "Missouri River points" had their transportation done for less than half price. But this does not seem to have made farming and other business so much more profitable than in other parts of the country as to attract an unusual part of the immigration. On the contrary, the country southwest of Chicago has been comparatively neglected for the last two or three years, during which the great rush has been to the Northwest. The war-railroads may have this consolation, however, that if the farmers do gain by the reduction of the railroad profits at this time, it will attract more population and stimulate larger production hereafter. We suspect, however, that the farmers' gains will be but trifling.

Record of New Railroad Construction.

This number of the *Railroad Gazette* contains information of the laying of track on new railroads as follows:

Denver & Rio Grande.—The *Utah Extension* has been extended from Delta, Col., west to Grand Junction, 50 miles. Gauge, 3 ft.

Jacksonville Southeastern.—Extended from Litchfield, Ill., southeast to Walshville, 7 miles.

Pennsylvania.—The *North & West Branch* is extended from Nanticoke, Pa., east by north to Wilkesbarre, 7 miles.

Pensacola & Atlantic.—Extended west to Marianna, Fla., 4 miles. Gauge, 5 ft.

Pittsburgh, Chartiers & Youghiogheny.—Extended south 8 miles to Painter's Run, Pa., completing the road.

Toledo & South Haven.—Extended from Lawrence, Mich., west to Hartford, 8 miles. Gauge, 3 ft.

This is a total of 84 miles of new railroad, making 9,255 miles thus far this year, against 6,983 miles reported at the corresponding time in 1881, 5,443 miles in 1880, 3,263 miles in 1879, 2,126 miles in 1878, 1,964 miles in 1877, 2,153 miles in 1876, 1,176 miles in 1875, 1,731 miles in 1874, 3,456 miles in 1873, and 6,559 miles in 1872.

CHICAGO RAIL SHIPMENTS EASTWARD for the week ending Nov. 21 for three successive years have been:

| | 1880. | 1881. | 1882. |
|------|--------|--------|--------|
| Tons | 53,096 | 49,421 | 50,404 |

This year the shipments were 2 per cent. greater than last year, and only 5 per cent. less than in 1880. They are the largest shipments since February last, and have been equaled, when rates were maintained and lake navigation was open, only four times—in two weeks of June and two of November, 1880.

Of the shipments of the week this year 15.3 per cent. went by the Chicago & Grand Trunk, 24.7 by the Michigan Central, 18.2 by the Lake Shore, 17.1 by the Fort Wayne, 18.2 by the Pan-handle, and 6.5 per cent. by the Baltimore & Ohio. Thus the two Vanderbilt roads together carried 42.9 per cent. of the whole, against 45½ due them in the pool, and the two Pennsylvania roads had 35.3 per cent. of the whole, against 35½ per cent. in the pool.

Some of the newspapers have been insisting that there must have been cutting of rates at Chicago because some of the roads have had an unusually large proportion of the shipments billed at Chicago, whereas it is not these shipments, but the total shipments billed at and through Chicago that are subject to division, and a road that gets very little of the freight shipped at the Chicago stations may get a great deal of that shipped from Milwaukee, Minneapolis, etc., through Chicago to the East.

There are often very great differences between the percentages of the total and of that part of it billed at Chicago going by the same route. There are, however, great fluctuations in the total, but they are, in the long run, in both directions, and do not lack much of balancing each other. There has been, we believe, no time in the history of the attempts to divide the Chicago traffic when there has appeared so general a disposition to maintain rates and live up to the agreement.

For the whole month of October the percentages shipped by the several roads compare as follows with the percentages to which they are entitled:

| | C. & G. T. | Mich. Cen. | Lake Shore. | Fort Wayne. | P. C. & St. L. | B. & O. |
|-------------|------------|------------|-------------|-------------|----------------|---------|
| Carried | 12.5 | 24.0 | 18.7 | 22.3 | 14.7 | 7.8 |
| Entitled to | 11 | 24¼ | 21¼ | 25¼ | 10 | 8 |

For seven successive weeks the Chicago shipments have been, in tons:

| | | Week ending | | | | | |
|--------|--------|-------------|----------|----------|----------|---------|----------|
| | | Oct. 7. | Oct. 14. | Oct. 21. | Oct. 28. | Nov. 4. | Nov. 11. |
| 32,810 | 34,790 | 33,580 | 34,041 | 43,982 | 44,721 | 50,401 | |

The average weekly shipments in September were 37,128 tons, in October 33,831 tons. The shipments in the third week of November were thus nearly 50 per cent. above the October average.

For the week ending Nov. 25 the shipments by rail billed

at Chicago (not including those from points west billed through Chicago) were 41,027 tons, against 35,624 tons in the corresponding week of last year, and 38,152 tons in the previous week of this year. This, we believe, is the first week since early spring that these shipments have been greater than in a corresponding week last year. The earnings from them must have been about at the rate of \$209 this year to every \$100 last year. The shipments of provisions were nearly the same this year as last, the grain shipments were 2,986 tons (14.3 per cent. less), but the flour shipments were 84,285 barrels (314 per cent.) greater.

The announcement of the advance in rates would naturally stimulate shipments, but it is a remarkable fact that it did not stimulate lake shipments; on the contrary they fell off, and lake rates fell from 3 to 2 cents a bushel.

BRITISH RAIL EXPORTS TO THE UNITED STATES were larger last October than in any other month since January, and with the exception of January they were the largest for thirteen months, and considerably more than the aggregate August and September exports. Indeed the September exports were the smallest since October, 1879, when the import business first began to revive. It may be thought strange that there should be a revival of imports of English rails at a time when the market for American rails was drooping, and the price unusually low. But rails imported are likely to have been ordered months before; and after all the importations in October even cannot be said to have been very large, considering the consumption of the country. Probably as many as 120,000 tons of rails were laid in October on new railroads alone, while the average consumption for maintenance and for new sidings and second tracks, not included in the above statement of consumption for new road, is probably on the average as much as 95,000 tons per month. Thus the British exports to this country in October, 23,642 tons, were probably only about one-eleventh of our total consumption that month. The monthly average this year, however, previous to October, had been but 17,777 tons; for the year 1881 it was 24,303 tons, and for 1880 18,200 tons. The imports of steel rails were but 10,055 tons a month in 1880, rose to 16,274 in 1881, and so far in 1880 have been 16,251 tons a month. The exports of steel in October last have been exceeded only in April and August of 1881, but iron exports to this country have been but trifling for a few months, while previously they were a large proportion of the whole, and in several months of last year exceeded the steel exports.

A recent statement of the British exports of railroad iron to the different European countries for the twelve years ending with 1881, shows a remarkable decrease of late years. In 1870 the exports to all European countries were 328,938 tons, and in the six years ending with 1875 the yearly average was 276,380 tons. In 1881 the total European exports were but 74,968 tons, and the average for the six years then ending was 136,081 tons—less than half of the average in the previous six years. In the last three years while railroad building has been so active here, Europe has taken less than ever before—but 86,381 tons a year. The most important European customer of Great Britain for rails has been Russia, which has sometimes taken more than all the rest of Europe. But it buys very little of late years, partly because it is building very little new road, and partly because it gets more rails from Germany and Belgium. Almost the only countries that have exported more since 1875, than before are Italy and Spain. France and Germany have almost ceased to import English rails, because they are manufacturing their own supply, and Germany now exports rails. Belgium and Holland together took 167,315 tons of English rails in the six years ending with 1875, and but 17,782 in the six years since. Belgium always did manufacture its chief supplies, and it is a large exporter, and probably now supplies Holland with most which it consumes. There has been no year since 1874 when the rail exports of Great Britain were as large to all Europe as to the United States in 1881.

IMMIGRATION IN OCTOBER shows a large decrease in comparison with last year, but we must remember that it was enormously large last year—nearly equal to the monthly average for the year, while ordinarily the arrivals so late in the year are much less than the average. The number arriving was 45,965 this year, against 67,929 last—a decrease of 32½ per cent.

For the four months ending with October, the arrivals have been 203,986 this year, against 239,734 last—a decrease of 15 per cent.

There is good reason why immigration should decrease. The movement is the result of the difference between the condition of things here and in Europe. For some years it has been hard living in Europe—work none too plenty, wages low, and the cost of living high; at the same time there has been extraordinary growth of all industries but farming here, a tremendous demand for labor not only for these industries but for the unprecedented amount of railroad construction and other building, and consequently high wages, which have much more than counterbalanced the high cost of living. For the man without capital, therefore, the balance of advantages was greatly in favor of this country. But after three years of tremendous emigration, Europe is less crowded; good crops there this year and elsewhere, and the resulting low prices have made living cheaper; and great as still is the activity in all industries here, it is not growing at anything like the rate of the past two or three years. We estimate that railroad construction alone in the last two years must have absorbed labor equal to the entire addition to the working force by immigration. Now, unless we increase the rate of construction, we shall not need to import labor

for this kind of work. If we build less, as in all probability we shall, we can spare some of the labor engaged in railroad construction this year for other work. Very likely there will be fewer buildings constructed next year, and in these two industries an enormous amount of labor has been engaged during the past two years. Wages have not generally fallen yet, but it is not so easy to get work as it once was, and intending immigrants find this out sooner than most of us do, being in constant communication with their fellows of the laboring class, who have preceded them. Thus two things tend to lessen immigration; the laborer's condition in Europe is more tolerable than it was, and the attractions in this country are not so great as they were, when every factory was trying to double its capacity, and we were doing two years' building in one year. Now for some time, if we are not mistaken, the chief outlet for the growth of population will be in the settlement of uncultivated land, which, in spite of the rapid growth of certain limited parts of the West, has not progressed in proportion to other industries, as the statistics of the Agricultural Department, showing the very moderate increase of the acreage under cultivation for some years, sufficiently show.

PENNSYLVANIA RAILROAD EARNINGS AND EXPENSES in October we give below for ten successive years, having given the net earnings only last week:

| Year. | Gross earnings. | Expenses. | Net earnings. |
|-----------|-----------------|-------------|---------------|
| 1873..... | \$3,757,311 | \$2,132,285 | \$1,625,026 |
| 1874..... | 3,482,587 | 2,040,548 | 1,442,039 |
| 1875..... | 3,272,267 | 1,829,433 | 1,442,834 |
| 1876..... | 4,004,429 | 1,821,278 | 2,183,151 |
| 1877..... | 3,210,038 | 1,704,764 | 1,505,274 |
| 1878..... | 3,215,418 | 1,655,871 | 1,559,547 |
| 1879..... | 3,518,144 | 1,832,214 | 1,685,930 |
| 1880..... | 3,882,715 | 2,194,321 | 1,688,394 |
| 1881..... | 3,672,971 | 2,317,930 | 1,355,042 |
| 1882..... | 4,660,053 | 2,622,341 | 2,037,712 |

The gross earnings this year were \$987,082 (27 per cent.), the working expenses \$304,402 (13 per cent.), and the net earnings \$682,680 (50½ per cent.) more than last year. The gross and net earnings were reduced considerably by the railroad war last year, and the net earnings in October were smaller than that before since 1873; but though the greatness of the increase is partly due to that the net earnings this year are 20 per cent. larger than in 1880, when they were larger than in any other October except in the Centennial year. The gross earnings were exceeded last August by \$11,126, but have been equaled in no other month. The working expenses continue very large, equaled only in the August and September of this year and in May and June of 1873.

For the ten months ending with October earnings and expenses have been for seven years:

| Year. | Gross earnings. | Expenses. | Net earnings. |
|-----------|-----------------|--------------|---------------|
| 1876..... | \$30,343,263 | \$18,716,426 | \$11,626,837 |
| 1877..... | 25,216,296 | 15,793,302 | 9,422,994 |
| 1878..... | 26,035,337 | 15,189,777 | 10,845,560 |
| 1879..... | 28,034,356 | 16,655,316 | 11,379,040 |
| 1880..... | 34,137,327 | 20,022,630 | 14,114,697 |
| 1881..... | 36,552,212 | 21,801,374 | 14,750,838 |
| 1882..... | 40,548,834 | 21,903,030 | 18,645,804 |

There is thus an increase over the corresponding ten months of 1881 of \$3,996,631 (11 per cent.) in gross earnings of \$3,102,246 (14½ per cent.) in working expenses, and \$894,376 (6 per cent.) in net earnings. All are the largest the road has ever had.

We gave the gains on the roads west of Pittsburgh and Erie last week. With increases in profits in November and December equal to those in October, the profits of the Pennsylvania Railroad Company this year will be about \$2,000,000 more than last year—enough for 2½ per cent. on the stock.

THE PROVISION EXPORTS for the packing year, ending with October, make a very bad showing. The quantities in tons of 2,000 lbs. were:

| | 1882. | 1881. | Decrease. | P. c. |
|-------------------------------------|---------|---------|-----------|-------|
| Fresh and salt beef and tallow..... | 66,486 | 110,527 | 44,041 | 40.0 |
| Hog products..... | 338,847 | 556,456 | 217,609 | 39.0 |
| Total..... | 405,333 | 666,983 | 261,650 | 39.2 |

These, it must be remembered, are among our most important exports. The vast decrease in them is chiefly attributable to the failure of the corn crop—a calamity whose widespread and long-continued effects are not yet sufficiently appreciated and which will be felt to some extent for a year to come, chiefly in the reduced stock of hogs.

It will be noted that the products of horned cattle were just about one-fifth the hog products in weight both years. In value the difference is still greater, that of hog products being six times as great this year.

The decrease in value of the provisions exported is just about as great as that in the quantity—39½ per cent.—and amounts to \$33,376,260. The greatest falling off was in fresh beef, amounting to 55½ per cent. in quantity. There was an increase in the salt beef exports.

The above does not include dairy products, which are reported only for the half-year ending with October, when they were 40,308 tons this year, against 58,005 last year, a decrease of 30 per cent. The decrease in these exports continued in October, and was then indeed unusually large in some items—in hog products being from 31,897 to 12,138 tons, or 62 per cent., and the exports were not large last year.

OCTOBER EARNINGS are reported in our tables for no less than 74 railroads, which had in the aggregate this year 54,915 miles of road, or more than one-half of the total now in operation in the United States, and 5,202 miles (10½ per cent.) more than in October last year. With this mileage they earned \$38,995,952, which is 16.6 per cent. more than last year, and their average earnings per mile increased from \$673 to \$710, or 5½ per cent.—the largest increase of the year. Of the 74 roads reporting, only 8 had

smaller total earnings than last year, but as many as 17 had smaller earnings per mile. All the important decreases, however, are on roads which have large additions of new road; but the Des Moines & Fort Dodge, with an increase of 28½ per cent. in mileage has a decrease of 21 per cent. in total earnings, and of 40½ per cent. in earnings per mile. The only other notable decrease is 17½ per cent. on the Denver & Rio Grande. Enormous increases of earnings per mile are not as common as they have been sometimes, but 98½ per cent. by St. Paul & Duluth, 47 by the Wisconsin Central, 44 by the Cleveland, Akron & Columbus, 40 by the Ohio Central, and 32 by the Manitoba ought to be satisfactory. There is a more general increase than has been shown for a long time nearly all the roads gaining considerably, but not many very greatly.

THE NEW YORK RAILROAD COMMISSION LAW, it is now reported in various quarters, is likely to be amended at the very beginning of the session of the new Legislature, so as to give the Governor the same liberty of choice that he has regarding other offices. As the law now stands, the Governor is required to appoint one Democrat, one Republican, and one nominee of Mr. F. B. Thurber, for that is what the provision amounts to which requires one to be the nominee of the New York Chamber of Commerce, the Board of Trade and Transportation and the Anti-Monopoly League, "or a majority of them," the two last named organizations being substantially bureaus of Mr. Thurber's. This limitation of the Governor's choice is a most absurd one, and it ought to be removed. To be sure the removal of it is likely to be due to Democratic thirst for office and desire to make the Commission a more efficient political agency in their own interest. That the victors should have only one-third of the spoils is an outrage in the eyes of the machine politician on either side. But if the Governor is permitted to use his discretion freely, we shall know whom to hold responsible for the character of the Commission, and there is room to hope at least that he will not use the places to reward party hacks, but have some regard to the qualifications of his appointees for performing the duties of their office.

THE OCTOBER GRAIN EXPORTS of the whole United States as reported by the Bureau of Statistics were, including flour, nearly the same this year as last (less than 1 per cent. greater). There was an increase of 83 per cent. in flour and 87 per cent. in wheat, but a decrease of 80 per cent. in corn.

For the four months ending with October, which dates but a little further back than the new crop year for wheat, there has been an increase over last year of 620,696 barrels (31½ per cent.) in flour, and of 16,660,101 bushels (40 per cent.) in wheat exports, but a decrease of 24,315,819 bushels (91½ per cent.) in corn exports, resulting in a decrease in all grains of 4,855,000 bushels (6.2 per cent.). We will probably have two months more of light corn exports, but there may be some revival of them in December, due to shipments from the more southern corn districts. There were a few days ago some arrivals of Kansas corn at St. Joseph, and a few car-loads have been sent to Chicago from Kentucky, whence the movement is usually southward and not northward.

DETENTION OF FREIGHT CARS ON FOREIGN ROADS may be a necessary evil, but it is nevertheless one which is not prevented by its necessity from assuming large proportions. Recently an average for cars sent to New England roads alone showed a loss to one large road of the time of 1,000 cars for one month, or in other words, the loss of a thousand round-trip car-loads of freight carriage between the seaboard and the West. The period in which the loss took place was a brief one; what the tally of a year would show we are unable to say. New England roads have no doubt improved in their return of foreign cars since the establishment of the Clearing House. As this institution, however, has no power but to give information, its work must be slow; and it is rendered slower by the laws of some New England states, which allow of no pressure upon the consignee of the freight. In other states the law is seldom taken advantage of—at least by the larger companies—but it serves as that gentle reminder which makes the speedy unloading of freight a matter of self-interest on the part of the consignee.

LAKE NAVIGATION closed yesterday (Nov. 30), so far as grain shipments from the upper to the lower lakes are concerned, as no insurance is given later. Shipments have been very light for a week past, and those nearly all by the propellers which run in connection with the trunk lines and give a through lake and rail rate to the seaboard. What shipments were consigned no further than Buffalo seem to have been taken at 2 cents a bushel, or a cent less than the week before, and nearly the lowest rate of the year, which is unusual, the closing rate often being high. There were the usual motives to ship freely, it would appear, as notice had been given of an advance of 20 per cent. in the rail rate Dec. 1, and the rail shipments were very large.

Ocean rates have remained strong and advanced, 7d. being paid last Tuesday for grain by steam from New York to Liverpool.

THE CHICAGO LUMBER TRAFFIC is not now so heavy as it was expected to be, but after all it is larger than ever before at this season. For the year down to Nov. 23, the receipts had been 1,969,459 thousand feet, which is an increase of 173,745 thousand, or nearly 10 per cent., over last year's unexampled receipts. The shipments and city consumption down to the end of October were 1,664,629 thousand feet,

which is 122,011 thousand (7½ per cent.) more than last year. The stocks at Chicago are a fifth larger than last year, but the demand, it is thought, will be sufficient to take it all by the time lake receipts begin in the spring.

General Railroad News.

MEETINGS AND ANNOUNCEMENTS.

Meetings.

Meetings will be held as follows:
Richmond & Danville, annual meeting, at the office in Richmond, Va., Dec. 13.
Richmond & West Point Terminal, adjourned annual meeting, in Richmond, Va., Dec. 11, at 1 p. m.
Knox & Lincoln, annual meeting, in Waldoboro, Me., Dec. 6.
International & Great Northern, special meeting, in Palestine, Tex., Dec. 19, to authorize the execution of a contract with the Galveston, Houston & Henderson Company.
Boston & Maine, annual meeting, in the City Hall at Lawrence, Mass., Dec. 13, at 10.30 a. m.
New York & New England, annual meeting, at the office in Boston, Dec. 5, at 11 a. m.
New York, Providence & Boston, annual meeting, at the office in Providence, R. I., Dec. 13, at 10 a. m.

Dividends.

Dividends have been declared as follows:
Delaware & Hudson Canal, 1½ per cent., quarterly, payable Dec. 11. Transfer books closed Nov. 25.
Norfolk & Western, 1 per cent., quarterly, on the preferred stock, payable Dec. 15.
Northern (New Hampshire), 3 per cent., semi-annual, payable Dec. 1.
Boston & Albany, 2 per cent., quarterly, payable Dec. 30. Transfer books close Nov. 29.
Chicago, Burlington & Quincy, 2 per cent., quarterly, payable Dec. 15. Transfer books close Nov. 28.
Chicago & Northwestern, 2 per cent., quarterly, on the preferred stock, and 3½ per cent., semi-annual, on the common stock, both payable Dec. 27. Transfer books close Dec. 6.
St. Paul & Duluth, 3½ per cent., semi-annual, on the preferred stock, payable Jan. 1. Transfer books close Nov. 29.

Foreclosure Sales.

The **Dorchester & Delaware** road was offered at public sale in Cambridge, Md., Nov. 28, but only one bid was received, for \$22,000, and the sale was adjourned. The road extends from Cambridge, Md., to the Delaware line, 28 miles.

Railroad Telegraph Superintendents' Association.

A meeting was held in Chicago, Nov. 20, at which some 25 gentlemen were present, and it was decided to form an association under the above name. The object of the association is the discussion of subjects connected with the telegraph service on railroads, and also electric railroad signals. Superintendents of telegraph, chief train dispatchers and chief operators will be eligible to membership. The Association was fully organized and officers elected. It was decided to hold the annual meeting on the third Wednesday in May, 1883. The Secretary of the Association is Mr. C. S. Jones, Illinois Central Railroad, Chicago.

ELECTIONS AND APPOINTMENTS.

Anglesea.—This company has been organized by the election of the following directors: John J. Burleigh, Josiah S. Hackett, George W. Reed, John T. Ryon, Frederick E. Swope, Marmaduke B. Taylor, Ebenezer Westcott. The board elected Frederick E. Swope President; George W. Reed, Secretary and Treasurer; Ebenezer Westcott, Superintendent; Marmaduke B. Taylor, Solicitor. Office in Camden, N. J.

Chicago & Atlantic.—At a meeting of the board held in New York, Nov. 25, the following members of the directory resigned: Lester T. Hunt, Samuel S. Terry, Joseph W. Purviance, John T. McPherson, and E. E. Willis. The following were elected in their places: Hugh J. Jewett, President of the New York, Lake Erie & Western; J. H. Adams, President of the New York, Pennsylvania & Ohio; C. C. Waite, Vice-President of the Cincinnati, Hamilton & Dayton; T. A. Lewis, of Indianapolis, and James R. Townsend, of Lima, O. Mr. Jewett was elected President, and Samuel B. Smith, Vice-President. The members of the old directory who remain in the new organization are S. B. Smith, O. W. Child, New York; Thomas Espy, Kenton, O.; George J. Bippus, Huntington, Ind.

East Broad Top.—Mr. A. W. Greenwood has been appointed Master Mechanic in place of G. A. Haggarty, resigned.

Illinois Central.—It is announced that from Jan. 1 next the authority of the general officers will be extended over the leased Chicago, St. Louis & New Orleans road.

The following changes and appointments will take effect Jan. 1 next: James C. Clarke, First Vice-President and Chairman of the Executive Committee; Stuyvesant Fish, Second Vice-President; John Dunn, Assistant to the President; W. J. Mauriac, Assistant Secretary; S. B. McCornico, General Agent at New Orleans; R. S. Charles, Local Treasurer, New Orleans; H. L. Shute, Freight Agent of the lines in Iowa.

Kansas City, Springfield & Memphis.—Mr. J. H. Sullivan has been appointed Superintendent of the Arkansas Division.

Mobile & Ohio.—The debenture holders met in New York, Nov. 25, and selected the following directors, who will be formally elected at the annual meeting by the trustees, who hold all the stock: W. Butler Duncan, C. H. Clark, A. Iselin, Jr., Jacob Hayes, J. H. Fay, W. H. Hays, A. L. Rivers, M. Waring, H. Hall, W. H. Pratt, August Belmont, Jr., E. L. Russell, J. P. McMahon.

New York, Lake Erie & Western.—At the annual meeting, Nov. 28, the following directors were chosen: Theron R. Butler, Charles Dana, Thomas Dickson, Harrison Durkee, R. Suydam Grant, Hugh J. Jewett, John Taylor Johnston, Edwin D. Morgan, William L. Strong, Jacob H. Schiff, James J. Goodwin, John Frederick Pierson, New York; F. N. Drake, Corning, N. Y.; Solomon S. Guthrie, Buffalo, N. Y.; Cortlandt Parker, Newark, N. J.; Homer Ramsdell, Newburg, N. Y.; J. Lowber Welsh, Philadelphia. The board is the same as that of last year, with the addition of Messrs. Goodwin and Pierson, who were chosen to fill vacancies existing.

Norfolk & Western.—Mr. James P. Scott, of Philadelphia, has been chosen a director in place of C. C. Baldwin, resigned.

Ohio & Mississippi.—General Master Mechanic J. H. Setchel has issued the following circular:

"Having assumed charge of the Machinery Department of this company, the following circular is issued for the information of all concerned.

"The headquarters of the department is established at Vincennes, and all communications for the General Master Mechanic should be addressed to him at this point.

"All officers and employees in good standing are hereby reappointed and no changes will be made except for good cause.

"All vacancies will, as far as possible, be filled by promotions, and to this end none but the very best men must be employed in any capacity.

"Men who abstain entirely from the use of liquors will be given the preference, and employees who indulge in intoxicating drink while on duty will be promptly dismissed from the service of the company.

"Division master mechanics will employ and regulate the wages of all employees except engineers and firemen, but the compensation of an employee must not be increased without permission from this office.

"Engineers and firemen will be employed under the special direction of the General Master Mechanic, but will be under the control of the division master mechanics.

"Division foremen will be under the control of and report to the master mechanics of their respective divisions."

Old Colony.—At the annual meeting in Boston, Nov. 28, the following directors were chosen: Charles F. Choate, F. L. Ames, Thomas J. Borden, John S. Brayton, Samuel C. Cobb, Uriel Crocker, Samuel L. Crocker, Francis B. Hayes, George Marston, Wm. J. Rotch, John J. Russell, Royal W. Turner, Elisha W. Willard.

Petersburg.—At the annual meeting in Petersburg, Va., Nov. 21, the following were chosen: President, E. T. D. Myers; directors, Joseph Bryan, James H. Dooley, T. M. Logan, W. H. Palmer, Frederick R. Scott. There is no change from last year.

Pittsburgh & Castle Shannon.—Mr. M. D. Hayes has been chosen a director in place of James McMasters, deceased.

Railway Telegraph Superintendents' Association.—The officers of this new association are: President, W. K. Morley, Chicago & Alton; Vice President, Wm. Kline, Lake Shore & Michigan Southern; Secretary and Treasurer, C. S. Jones, Illinois Central.

Richmond & Petersburg.—At the annual meeting in Richmond, Va., Nov. 28, the following were chosen: President, Frederick R. Scott; directors, R. R. Bridges, H. K. Ellyson, B. W. Haxall, D. W. Lassiter, W. F. Walters.

St. Louis, Ft. Scott & Wichita.—Mr. J. W. Miller is appointed Superintendent in place of J. D. Hill, resigned.

Sauk Centre Southern.—The directors of this new company are: Alexander Moore, Henry Keller, G. M. Bennett, J. V. Brower, W. R. Gillis. Office at Sauk Centre, Minn.

Union Pacific.—The President has appointed Mr. Colgate Hoyt, of New York, a government director in place of George S. Spencer, removed. Mr. Hoyt is a member of the firm of James B. Colgate & Co., bankers.

Valley of Ohio.—Mr. J. E. Turk, for some time past Acting Superintendent, has been appointed General Superintendent, with office in Cleveland.

Wabash, St. Louis & Pacific.—Mr. K. H. Wade is appointed Superintendent of Transportation, with office in St. Louis. He was formerly on the Wabash road, but has been for some time Superintendent of the Iowa Division of the Chicago, Burlington & Quincy.

PERSONAL.

—Mr. W. H. Glenny, for many years a prominent merchant of Buffalo, N. Y., died in that city Nov. 27, aged 64 years. He was a director of the Buffalo, New York & Philadelphia Company for many years.

—Mr. M. C. Wheeler, has resigned his position as Master Mechanic of the New Mexico Division of the Atchison, Topeka & Santa Fe, with office at Wallace, N. M. His address for the present will be at Marshalltown, Iowa.

—John Tobin, once President of the Hudson River Railroad Company and a very wealthy man, was arrested in New York the other day for drunkenness, and disorderly conduct. Mr. Tobin was at one time largely interested in railroads, but took no active part in their management. He was a speculator only, and when his plans ended in failure, he took to drinking and sank rapidly.

—Mr. Frederick de Funiak will soon go to Europe for a short pleasure trip. Mr. de Funiak gives his reasons for resigning his position as General Manager of the Louisville & Nashville as follows:

"My reasons are of a purely private nature. I have been contemplating this action for some months, as I have been needing rest and recreation, but I do not suppose that the New York management had any inkling that I was going to resign just at this time until my resignation was received. I would have left sooner, but preferred not to resign when my departure might cause some inconvenience to the other officers of the road by throwing the business of the department of which I have charge into temporary confusion. The present seems a favorable opportunity to resign, and I have done so. * * * The principal reason for leaving my present position is, however, in order to devote my attention more fully to the affairs of the new Pensacola & Atlantic road, now building, of which I am President and a large stockholder. I wish it particularly emphasized that I have had no trouble with the management of the Louisville & Nashville road, and bear no ill-will toward any of them, nor am I dissatisfied with the condition of the company. I shall leave with the best wishes for the success of the company, and with the highest personal regard for its officers."

TRAFFIC AND EARNINGS.

Coal Movement.

Coal tonnages for the week ending Nov. 18 are reported as follows:

| | 1882. | 1881. | Inc. or Dec. P. c. |
|------------------------|---------|---------|--------------------|
| Anthracite..... | 704,394 | 650,285 | I. 54,109 8.3 |
| Semi-bituminous..... | 132,417 | 114,100 | I. 18,317 16.1 |
| Bituminous, Penna..... | 71,977 | 62,660 | I. 9,317 14.9 |
| Coke, Pa..... | 67,127 | 47,576 | I. 19,551 41.1 |

The question of rates from the Clearfield Region to tide-water has not yet been fully settled. A conference was held last week, at which it is understood that some of the large operators agreed to accept the rates offered by the Pennsylvania Railroad Company, while others refused and claim that the company is bound to carry out the special contracts which it lately set aside.

The coal tonnage of the Pennsylvania Railroad for the week ending Nov. 18, was: Coal, 179,077; coke, 67,127; total, 246,204 tons. The coke tonnage is the largest ever

reported in one week. The total tonnage this year to Nov. 18 was 9,739,505 tons.

The coal tonnage of the Philadelphia & Reading road, as reported by the Receivers, was as follows for October and the eleven months for the fiscal year from Dec. 1 to Oct. 31:

| | October. | —Eleven months.— |
|--|-----------|------------------|
| | 1882. | 1881. |
| Tons carried on road..... | 886,802 | 812,499 |
| Tons mined from lands of Coal & Iron Co..... | 594,597 | 567,143 |
| | 5,024,450 | 4,853,183 |

For the eleven months the increase in tons carried was 319,022, or 4.4 per cent.; in tons mined, 171,267, or 3.5 per cent. The tons mined include the coal output by the Coal & Iron Company itself and the tenants operating on its lands.

Coal shipments over the Columbia & Puget Sound road and by sea from Seattle, Wash. Ter., in October were 11,966 tons, all to San Francisco.

The coal tonnage of the Chesapeake & Ohio Railroad for the ten months ending Oct. 31 was:

| | 1882. | 1881. | Increase | P. c. |
|------------|---------|---------|----------|-------|
| Coal..... | 714,186 | 590,163 | 124,023 | 21.0 |
| Coke..... | 70,135 | 61,135 | 9,000 | 14.6 |
| Total..... | 790,321 | 651,298 | 139,023 | 21.4 |

The October tonnage was 83,363 tons, of which 14,580 tons went to Newport News and 10,598 tons to Richmond for shipment by water.

Railroad Earnings.

Earnings for various periods are reported as follows:

| Ten Months Ending Oct. 31: | | | | |
|----------------------------|-----------|-----------|--------------|-------|
| | 1882. | 1881. | Inc. or Dec. | P. c. |
| Buff., Pitts. & West..... | \$741,080 | \$559,365 | I. 181,715 | 32.2 |
| Net earnings..... | 382,445 | 201,713 | I. 180,732 | 89.6 |
| Norfolk & Western..... | 1,943,747 | 1,832,595 | I. 111,152 | 6.1 |
| Net earnings..... | 877,021 | 888,133 | D. 10,512 | 1.2 |
| Northern Central..... | 4,971,502 | 4,479,916 | I. 491,586 | 10.9 |
| Net earnings..... | 1,946,838 | 1,327,807 | I. 619,131 | 47.3 |
| West Jersey..... | 667,649 | ..... | ..... | ..... |
| Net earnings..... | 428,837 | ..... | ..... | ..... |

| Month of October: | | | | |
|------------------------|-----------|-----------|--------------|-------|
| | 1882. | 1881. | Inc. or Dec. | P. c. |
| Norfolk & Western..... | \$272,318 | \$246,530 | I. 25,788 | 10.5 |
| Net earnings..... | 152,630 | 147,984 | I. 4,646 | 3.1 |
| Northern Central..... | 530,224 | 449,663 | I. 80,561 | 22.3 |
| Net earnings..... | 206,113 | 79,341 | I. 126,772 | 158.6 |
| Utah Central..... | 132,935 | 137,650 | D. 4,715 | 3.4 |
| Net earnings..... | 82,534 | 93,033 | D. 10,499 | 11.3 |
| West Jersey..... | 83,164 | ..... | ..... | ..... |
| Net earnings..... | 28,063 | 26,529 | I. 1,507 | 5.7 |

| Second week in November: | | | | |
|--------------------------|----------|----------|--------------|-------|
| | 1882. | 1881. | Inc. or Dec. | P. c. |
| Chi. & Grand Trunk..... | \$58,481 | \$34,769 | I. 23,712 | 65.5 |
| Grand Trunk..... | 365,440 | 312,965 | I. 52,475 | 16.9 |
| Ind., Bloom. & West..... | 59,534 | 49,265 | I. 10,269 | 20.9 |

| Third week in November: | | | | |
|-------------------------|-----------|-----------|--------------|-------|
| | 1882. | 1881. | Inc. or Dec. | P. c. |
| Chi., Mil. & St. P..... | \$476,000 | \$359,914 | I. 116,086 | 32.2 |
| Chic. & N. W..... | 449,100 | 427,670 | I. 21,500 | 5.0 |
| Denver & R. G..... | 115,200 | 127,804 | D. 12,604 | 9.4 |
| Hann. & St. Jo..... | 66,061 | 44,905 | I. 21,156 | 47.0 |
| St. P. & Duluth..... | 27,376 | 18,065 | I. 9,311 | 51.7 |

Petroleum.

The production of the Pennsylvania and New York oil regions in October is reported as follows by Stowell's *Petroleum Reporter*, the standard authority of the trade, in barrels of 42 gallons:

| | 1882. | 1881. | Inc. or Dec. | P. c. |
|-----------------------------|------------|------------|--------------|-------|
| Production..... | 2,297,658 | 2,323,171 | D. 25,513 | 1.1 |
| Shipments..... | 2,089,428 | 2,080,467 | I. 8,961 | 0.4 |
| Stock, Oct. 31..... | 32,608,363 | 25,309,361 | I. 7,299,172 | 28.8 |
| No. of producing wells..... | 19,000 | 17,799 | I. 1,201 | 6.7 |

The production for the month is the smallest reported since September, 1881, and was exceeded in seven months of last year and in every month of this year. The new Allegheny District in New York produced 21.6 per cent. of the total; the Bradford District, 54.0 per cent.; the Middle districts, 12.4, and the Southern districts 12.0 per cent.

The shipments have been exceeded only in two months of the present year and in but two months of last year.

The stock reported is all in the pipe lines, and is the heaviest ever reported.

The number of producing wells is reduced 600 from September, partly by a careful revision of the list. There were 117 new wells completed in October and 184 are in progress.

Shipments of crude oil are reported as follows:

| | Barrels. | P. c. of |
|----------------------------------|-----------|----------|
| New York..... | 872,332 | 41.8 |
| Philadelphia..... | 169,635 | 7.7 |
| Baltimore..... | 36,642 | 1.7 |
| Cleveland..... | 516,038 | 20.1 |
| Pittsburgh..... | 101,602 | 4.9 |
| Local points..... | 187,789 | 8.8 |
| Refined at Creek refineries..... | 188,390 | 9.0 |
| Total..... | 2,089,428 | 100.0 |

Shipments of oil refined at Creek refineries (reduced to its equivalent in crude) were: To New York, 98,624; Philadelphia, 1,038; Baltimore, 1,030; Boston, 57,697; local points, 30,001; total, 188,390 barrels.

Of the total shipments reported, including refined, 732,152 barrels, or 35.5 per cent. were by rail, and 1,348,276 barrels, or 64.5 per cent., by pipe line.

The exports of refined and crude oil from the United States for the ten months ending Oct. 31, were 421,224,272 gallons, against 410,032,162 gallons in the corresponding period last year, an increase of 11,192,110 gallons, or 2.7 per cent.

Grain Movement.

For the week ending Nov. 18 receipts and shipments of grain of all kinds at the eight reporting Northwestern markets and receipts at the seven Atlantic ports have been, in bushels, for the past eight years:

| —Northwestern shipments.— | | | | |
|---------------------------|------------------------|-----------|-----------|----------------|
| Year. | Northwestern receipts. | Total. | By rail. | P. c. by rail. |
| 1874..... | 2,222,849 | 1,042,633 | 278,362 | 26.7 |
| 1875..... | 3,376,429 | 2,376,015 | 876,901 | 36.9 |
| 1876..... | 2,855,045 | 2,679,746 | 1,272,753 | 47.5 |
| 1877..... | 3,624,676 | 2,717,945 | 461,569 | 17.0 |
| 1878..... | 4,210,803 | 2,782,672 | 689,159 | 24.8 |
| 1879..... | 3,540,174 | 3,476,939 | 594,979 | 17.1 |
| 1880..... | 5,226,285 | 4,928,795 | 2,287,205 | 46.4 |
| 1881..... | 3,223,458 | 2,845,736 | 2,008,138 | 70.6 |
| 1882..... | 4,552,743 | 3,826,950 | 2,106,624 | 55.1 |

The receipts of the Northwestern markets for the week were larger than in the corresponding week of any previous year except 1880, and 40 per cent. more than last year. They were 482,000 bushels less than the week before and the smallest since Aug. 12. This is not remarkable, however, as there is always a falling off at this season, when lake navigation is about closing, and this year the decrease from October is less than usual.

The shipments of these markets were also larger than in any corresponding week except in 1880 nearly a million bushels larger than last year; they were also larger than the week before, and with one exception the largest for five weeks. The rail shipments were larger than last year even where the rate was but half as high, and the earnings from these shipments must have been about at the rate of \$1,000 this year to every \$477 last year. The shipments down the Mississippi were 80,633 bushels, or 21 per cent. of the whole

The Atlantic receipts of the week were but a trifle larger this year than last and were smaller than in the corresponding week of any preceding year since 1875.

At all times of late years, it should be remembered, flour receipts and shipments have been much larger than in any previous year.

Of the Northwestern receipts, for the week, Chicago had 41.9, per cent, St. Louis 16.5, Peoria 11.3, Toledo 10.7, Milwaukee 9.5, Duluth 5.2, Detroit 4.6 and Cleveland 0.3 per cent. The whole falling off of the week was less than the decrease of Chicago, which naturally feels most the closing of lake navigation. There is a large gain at Peoria, where their were large corn receipts, and Duluth appears as a receiver for the first time in five weeks.

Of the Atlantic receipts New York had 67.7 per cent., Baltimore 10.6, Boston 10.4, Philadelphia 7.1, Montreal 3.3, New Orleans 1.8 and Portland 0.1 per cent. The New York receipts were the largest of this year, with the exception of the last week in August and about 600,000 bushels more than the week before. At nearly all other places there was a decrease from the previous week, and at New Orleans (where great fluctuations are common) the receipts were but trifling—about one-thirteenth of its receipts the week before.

The exports from these ports this week were 1,771,307 bushels, of which 54.4 per cent. went from New York, 20.2 from Montreal, 12.1 from Baltimore, 6.3 from Boston, 4.8 from Philadelphia and 2.2 per cent. from New Orleans.

For the week ending Nov. 22 the Atlantic exports were 1,587,557 bushels of grain and 119,788 barrels of flour this year, against 2,143,163 bushels and 59,855 barrels last year and 4,112,718 bushels and 142,442 barrels in 1880. The exports this year are the largest for three weeks.

For the week ending Nov. 25 receipts and shipments at Chicago and Milwaukee were:

| | Receipts. | | Shipments. | |
|----------------|-----------|-----------|------------|---------|
| | 1882. | 1881. | 1882. | 1881. |
| Chicago..... | 2,100,391 | 1,207,414 | 1,988,681 | 906,523 |
| Milwaukee..... | 445,376 | 253,073 | 130,757 | 82,261 |
| Both..... | 2,605,767 | 1,456,486 | 3,119,438 | 988,784 |

The receipts were thus 79 per cent., and the shipments 131 per cent greater than last year.

At Buffalo for the week ending Nov. 25 receipts and shipments were:

| | Receipts. | | Shipments. | |
|---------------|-----------|---------|------------|---------|
| | 1882. | 1881. | 1882. | 1881. |
| By rail..... | 657,200 | 428,200 | 891,900 | 735,800 |
| By water..... | 283,500 | 479,800 | 1,060,370 | 126,775 |
| Total..... | 940,700 | 908,000 | 2,252,270 | 862,575 |

The lake receipts were but trifling, falling off unusually early. The rail receipts were one half more than last year, in spite of rates twice as high. The rail shipments were a little larger than last year; the canal shipments thirteen times as great. These are, substantially, the last canal shipments of the year.

For the week ending Nov. 25 the receipts at four Eastern ports for three years have been:

| | New York. | Boston. | Phila. | Baltimore. | Total. |
|-----------------|-----------|---------|---------|------------|-----------|
| 1882..... | 3,011,770 | 288,525 | 236,975 | 381,061 | 3,918,331 |
| 1881..... | 2,702,722 | 345,455 | 204,420 | 367,534 | 3,620,131 |
| 1880..... | 3,693,205 | 424,660 | 490,800 | 1,223,576 | 5,832,241 |
| P. c. of total: | | | | | |
| 1882..... | 77.0 | 7.3 | 6.0 | 9.7 | 100.0 |
| 1881..... | 74.5 | 9.8 | 5.6 | 10.1 | 100.0 |
| 1880..... | 63.3 | 7.3 | 8.4 | 21.1 | 100.0 |

Philadelphia and Baltimore together had 15.7 per cent. of the whole this year, against 15.7 per cent. in 1881, and 20.5 per cent. in 1882. Of the New York receipts for the week 1,472,434 bushels (49 per cent.) arrived by rail this year, against 969,104 bushels (36 per cent.) last year.

Corn last week was the chief grain received and shipped at Chicago and Buffalo and the chief rail receipts at New York. The supply in the East is so nearly exhausted as to compel shipments at almost any price, and there have already begun some shipments of new corn from the more southerly corn country, which may be expected to assume large proportions soon.

| | Receipts. | | Shipments. | |
|---------------------|-----------|-----------|------------|-----------|
| | Wheat. | Corn. | Wheat. | Corn. |
| Weekly average..... | 1,443,320 | 1,202,640 | 1,033,670 | 1,085,506 |
| Sept..... | 2,343,421 | 1,780,065 | 1,105,630 | 1,641,577 |
| Oct..... | 1,687,573 | 908,289 | 836,211 | 1,280,573 |

| | Nov. 7. | Nov. 14. | Nov. 21. | Nov. 28. |
|--------------|-----------|-----------|----------|----------|
| Nov. 7..... | 1,088,618 | 1,025,569 | 835,082 | 913,923 |
| Nov. 14..... | 1,349,602 | 1,121,382 | 763,913 | 978,084 |
| Nov. 21..... | 97,757 | 1,044,824 | 675,829 | 725,017 |
| Nov. 28..... | 1,170,390 | 1,725,763 | 700,763 | 567,413 |

The wheat receipts are larger than the week before, but smaller than before; the corn receipts were the largest since September, and indicate that new corn is coming forward to supply the local demand, as it can be used for feeding when it will not bear long storage or exportation. The wheat shipments were the smallest recorded since July: the corn shipments the largest.

St. Louis Live Stock Apportionment.

The division of the live-stock traffic from St. Louis east has heretofore been made the same as that of other freight, namely, 12 per cent. of the whole went to the Ohio & Mississippi and 22 per cent. each to the other four roads. The Vandalia Line complaining that it naturally received a much larger proportion than 22 per cent., investigation and argument were had, and Mr. Fink made a new apportionment, giving the Ohio & Mississippi 11 per cent., the Vandalia Line 26 per cent., and the other three roads 21 per cent. each—that is 1 per cent. was taken from each of the other four roads and added to the Vandalia Line's share.

From this award the Wabash and the Chicago & Alton roads have appealed to Mr. Adams, the Arbitrator.

The Vandalia is the only line likely to carry to any extent to all the seaboard cities; but a considerable share of the St. Louis shipments go to Chicago before their destination is determined, and these of course can be carried only by the roads that have lines to Chicago.

The Northwestern Railroad War.

The past week has been chiefly occupied in negotiations for the settlement of the war which has been raging between the Northwestern roads, and has not been marked by any especial features on the ground, except that the Chicago, Milwaukee & St. Paul has carried the war southward and cut rates between Chicago and Rock Island to a nominal figure.

Proposals for a settlement were made by President Keep, of the Chicago & Northwestern. The warring roads agreed to a conference in New York, and a proposition was made that rates be maintained by all parties for 30 days, pending negotiations for a settlement.

Some ill-feeling had been caused in the mean time by the publication of an old letter from President Porter, of the Chicago, St. Paul, Minneapolis & Omaha, in which he complained bitterly of the Milwaukee & St. Paul's aggressive tendency. It is said, however, that the 30 days' agreement would have been signed, had not news been received of the St. Paul's purchase of the Chippewa Valley & Superior road, which President Porter regarded as an incursion into territory specially belonging to his road (it has always been understood, however, that this line was to be a Milwaukee & St. Paul road), and he refused to make the agreement. Another meeting was held Nov. 28 at the Northwestern

office in New York, but it resulted in nothing, in consequence, the St. Paul people charged, of the refusal of the Omaha Company to consent to anything proposed. A conference was appointed in Chicago for Saturday, Dec. 2, however, pending which the two belligerents talk very warlike.

The Iowa Traffic Association met in Chicago, Nov. 28, but took no action on any matters relating to the Northwestern war.

OLD AND NEW ROADS.

Anglesea.—This company has been organized to build a railroad from the West Jersey near Cape May Court House, N. J., southeast to Anglesea, on the Five Mile Beach, where a new summer resort is to be established. The road will be about six miles long.

Brunswick & Albany.—A general meeting of the foreign bondholders of the Brunswick & Albany Railway, of Georgia, was held last week in Frankfurt, Germany. The bonds represented amounted to \$993,000. An agreement in accordance with the recommendations of the committee and the New York counsel was approved. It was decided to pay the coupons and coupon certificates of 1872 and 1873 at the rate of one mark (24 cents) each. This road is 172 miles long, and was foreclosed in 1873. It has since been operated for account of the bondholders. The present agreement is for a reorganization and the formation of a new company, which, it is stated, is to be controlled by the Alabama Great Southern or Erlanger syndicate.

Buffalo, Pittsburgh & Western.—This company's statement for the ten months ending Oct. 31 is as follows:

| | Main line. | Oil City & Chi. | Total. |
|-------------------|------------|-----------------|-----------|
| Earnings..... | \$636,473 | \$104,607 | \$741,080 |
| Expenses..... | | | 358,635 |
| Net earnings..... | | | \$382,445 |

As compared with the corresponding period in 1881, there was an increase of \$181,715, or 32.4 per cent., in earnings; an increase of \$983, or 0.3 per cent., in expenses, and an increase of \$180,732, or 89.6 per cent., in net earnings.

Canadian Pacific.—The stockholders have voted to increase the capital stock of the company from \$15,000,000 to \$100,000,000.

There is now every prospect that the contract made by Langdon, Sheppard & Co., of Milwaukee, to build 500 miles of this road, will be completed in one year from the signing of the papers, which is pretty fast work. This contract ends at the Saskatchewan River, 635 miles from Winnipeg.

Canada Southern.—The cut-off from Essex Centre, Ont., to Windsor, opposite Detroit, is now all graded, and track is laid from Essex Centre 19 miles, leaving three miles to reach Windsor. Work is in progress on the ferry slips at Windsor.

It is stated that this company has let a contract to Clark, Reeves & Co. to build a new suspension bridge over the Niagara River, about a quarter of a mile above the old suspension bridge. It will connect the road with the New York Central and the Rome, Watertown & Ogdensburg.

Central Iowa.—This company has taken formal possession of the Chicago, Burlington & Pacific line, which is nearly completed from Oskaloosa, Ia., to Brighton, and is to run to the Mississippi at Keokuk.

Central New Jersey.—At a meeting of the directors, in New York last week, every member of the board was present except Mr. Franklin B. Gowen, who is now on his way from Europe. The meeting resulted in the appointment of a committee to examine into the affairs of the company and devise a plan for taking it out of the hands of the receiver.

Henry S. Little, the Receiver, presented a statement of the company's condition, which showed that if the recent addition to the plant had been capitalized, the company would have no floating debt. The number and names of the members of the committee were not made public. Another meeting of the board will be held when the committee is ready to report.

Central Vermont.—The following notice is issued by the American Loan & Trust Company of Boston, under date of Nov. 25: "A plan has been agreed upon among the leading security holders for the reorganization of the Vermont Central and the Vermont & Canada Railroads, and the settlement of all disputes among their security holders. The plan has been placed in our hands for execution, and the security holders of all classes are respectfully invited to call and examine the same and give their assent thereto, if it meets their approval, within 30 days from date."

Chicago & Eastern Illinois.—Acting on the recent decision of the Supreme Court, the attorney for the Chicago, Danville & Vincennes bondholders on Nov. 23 filed a petition in the United States Circuit Court in Chicago, asking that their case may be referred to a master to take proof, and that the Court appoint a receiver for that part of the Chicago & Eastern Illinois road which was included in the Chicago, Danville & Vincennes property sold under the decree of foreclosure.

Chicago, Milwaukee & St. Paul.—It is announced that this company has bought the Chippewa Valley & Superior road, and will issue \$1,675,000 bonds in payment thereof. The road extends from Eau Claire, Wis., to Wabasha, and its construction constituted one of those intrusions into other company's territory which is given as one of the reasons for the present war in the Northwest.

It is said that this company will build two or three branches as feeders to the western end of the Iowa divisions. One will probably leave the main line at or near Manning, in Carroll County, and run to Sioux City. Another will start off at Coon Rapids, thence through the east side of Audubon County to Atlantic, and eventually southwest.

Delaware, Lackawanna & Western.—This company has ordered that commutation tickets on the Morris & Essex Division shall be sold hereafter at stations along the line. This is a great accommodation to commuters, who have heretofore been obliged to go to the New York office for their tickets.

The company will also soon place on sale thousand-mile tickets for the use of families and members of one business house as well as for individuals. The rate is 2 cents per mile.

Denver & New Orleans.—The following circular has been addressed to stockholders of the Denver & New Orleans Railway Construction Company:

"The condition of the bond market having been such that it has been found impossible to negotiate the mortgage bonds of the Denver & New Orleans Railroad as soon as was expected, and the floating debt of the Construction Company being now over \$200,000, it is necessary to raise at once that amount of money to relieve the Construction Company from embarrassment, and place it in such position that it can be carried along until the railroad bonds can be sold. All the assets of the Construction Company having been pledged to the Mercantile Trust Company in trust, as secu-

rety to the holders of its 10 per cent. trust notes, there now remains with the Trust Company, ready for issue, \$200,000 of these notes. The Construction Company has made an assessment upon its stockholders of 20 per cent. of the capital stock, for which these notes will be given. New York stockholders are requested to call upon Messrs. Winslow, Lanier & Co., No. 26 Nassau street, the financial agents of the company, and sign the agreement for the purchase of these notes. Stockholders resident out of town are requested to sign the blank form of agreement and return to Messrs. Winslow, Lanier & Co."

Denver & Rio Grande.—Track on the Utah Extension is now laid to Grand Junction, Col., 50 miles westward from the late terminus at Delta, and 425 miles from Denver. The new terminus is only 37 miles from the Utah line.

Framingham & Lowell.—The petition to the Massachusetts Railroad Commissioners for action relative to an alleged illegal issue of stock, on which several hearings have been given, and which the Commissioners have since been considering, has been withdrawn by the petitioner, the stock in question having been cancelled by the company with the consent of the holders. The petitioner in this matter was Mr. T. F. Nutter, a stockholder. The alleged illegal issue of stock grew out of the fact that Messrs. H. A. Blood, S. N. Aldrich and E. H. Hewins had presented claims to the amount of \$133,000, \$26,500 and \$12,253 respectively for extraordinary services rendered the road. These claims were referred to a board of arbitrators, a majority of which reported in favor of issuing to the claimants in full settlement 700, 200 and 100 shares respectively, of the preferred stock of the road; while a minority report favored a settlement in cash of a much smaller amount. Subsequently the directors of the road cancelled that award and made another adjustment by issuing to Mr. Blood 482 shares; to Mr. Aldrich 154 shares, which were refused, and to Mr. Hewins 69 shares.

Genesee Valley.—Regular passenger and freight trains are now running over this road from Rochester, N. Y., to Hinsdale, the southern terminus, where connection is made with the Buffalo, New York & Philadelphia road. Through trains began to run Nov. 25.

Jacksonville Southeastern.—The track of this road is now laid to Walshville, Ill., seven miles southeast of the late terminus at Litchfield. Work is progressing on the extension towards Centralia. The company now proposes to build a branch to East St. Louis.

Manitoba Railroad Charters.—The Dominion government has disallowed and disapproved acts of the Manitoba Legislature chartering the Emerson & Northwestern Company and the Manitoba Tramway Company and also an "act to encourage the building of railroads in Manitoba," on the ground that they grant privileges which conflict with the government's contract with the Canadian Pacific Company.

Massachusetts Central.—The Boston Traveller says: "The petition of the Massachusetts Central Railroad Company to the Legislature, for authority to extend its line through the western portion of the state from Palmer to the state line, and which was filed at the State House yesterday, is the initiative step in an important project, the consummation of which is to be accomplished as speedily as possible. The company has in view the construction of a line from Bondville (in Palmer) to the state line, and thence to Ancram, N. Y., securing from that point, over the Poughkeepsie, Hartford & Boston Railroad an entrance to Poughkeepsie and connections with the Erie and Pennsylvania systems. The proposed route is 197 miles, 88 of which, to Bondville, is practically finished, the road-bed from Jefferson to that point being almost all ready for the rails. The cost of the entire road from Boston (counting, of course, the new road only required) will, it is estimated, be not far from \$5,000,000, and with this sum a double track from Bondville to Ancram can be built. This project is the same that was agitated ten years ago by prominent Boston capitalists, but that at the time was given up because of the financial panic. Prominent New York parties are now interested in it, and intend to put it through if in any way possible. They anticipate considerable opposition from the existing lines, but are amply prepared to meet it. The line proposed will be considerably shorter than the New York & New England, and will have, besides, many advantages in the way of easy grades and excellent terminals. So far as the old Massachusetts Central line to Northampton is concerned, it is intended to finish this entirely independent of the new project, and other parties will furnish capital for the same upon a basis which will be made known to the security holders at an early date. Indeed, the directors have even now about decided upon a plan for adjusting matters, and this will be ready for the bond and stockholders, it is now positively known, within two weeks."

Memphis & Charleston.—At the special meeting last week the following statement was presented as to the canceling of the lease to the East Tennessee, Virginia & Georgia Company:

"Your Committee deemed it wise as a matter of compromise to accept the proposition, and on Nov. 1, last, your Vice-President tendered the amount claimed by Messrs. Seney, Brice and Shethar, the committee, which they declined to receive at that time in view of the existing injunctions, and granted an extension of the option to allow the necessary time for a dissolution of the injunctions. To enable your Committee to provide the necessary funds to meet these payments it advertised for subscriptions to the \$5,312,735 of common stock, as authorized, and at the rate of 12 cents on the dollar, from which will:

| | |
|--|-----------|
| Be realized the sum of..... | \$637,527 |
| From sale of \$306,000 general mortgage bonds in the treasury..... | 367,200 |

Making a total of.....\$1,004,727

"The amount to be paid the East Tennessee, Virginia & Georgia Company will be:

| | |
|------------------------------------|-----------|
| For cancellation of lease..... | \$400,000 |
| Floating debt, Sept. 22, 1882..... | 794,373 |
| Interest to date..... | 7,943 |

Total.....\$1,202,316

"Leaving a balance to be provided for of \$197,589. As the \$172,000 of general mortgage bonds in the treasury, in addition to the \$306,000, were authorized to be issued for a special purpose, they cannot be used in the settlement of this claim; and it is suggested that authority be given to issue a sufficient amount of mortgage bonds to meet the deficiency. In making this report it is not intended to approve or recognize the amount of the floating debt, or the validity of the lease, but merely to consider them as a base of compromise. When the lease is canceled, and your property placed under the management of your board of directors, it will be without floating debt, and show only the following liabilities:

| | |
|----------------------|-------------|
| Bonded debt..... | \$4,700,000 |
| Preferred stock..... | 5,312,725 |
| Common stock..... | 5,312,725 |

Total.....\$15,325,450

"Your board feel much encouraged at the future pros-

pects of your company in anticipation of the cancellation of the lease, and the early completion of the railroad from Memphis to Kansas City, which must add greatly to your revenues and insure a satisfactory dividend on the stock at an early day."

The stockholders passed resolutions authorizing a lease of the road to parties not named for the interest on the bonds and dividends on the stock to be 4 per cent. for seven years; 5 per cent. for eight years and 6 per cent. for the remaining 15 years of the lease.

It is said that the lessee proposed is the Kansas City, Springfield & Memphis, the company which is extending the Kansas City, Ft. Scott & Gulf road to Memphis.

Missouri Pacific.—The following is published by the New York World, as an official statement of the operations of this road (including the St. Louis, Iron Mountain & Southern) for the ten months ending Oct. 31:

Gross earnings.....\$12,476,623
Working expenses (52.44 per cent.).....6,543,020

Net earnings.....\$5,933,603
Interest, rental, etc.....2,916,667

Net profit, ten months.....\$3,016,936

The net profit for November and December is estimated at \$1,250,000, which would make a total for the year of \$4,266,936, an amount equivalent to 14.22 per cent. upon the \$30,000,000 stock.

New York Central & Hudson River.—George Melius, the rear brakeman of the passenger train which was wrecked at Spuyten Duyvil on the night of Jan. 13 last, was some time ago indicted for manslaughter, on the ground that the accident was at least partly due to his neglect in not going back at once with a signal when his train was stopped. He was tried last week in the Court of Oyer and Terminer in New York on this indictment, and the jury brought in a verdict of "Not guilty."

New York & New England.—This company advertises for first-class freight conductors, engineers, firemen and brakemen, who are needed "on account of rapid growth of business." Preference will be given to men from New England roads, who are used to a single-track line.

The Hartford correspondent of the Springfield Republican says: "An amusing little side show in the general course of the affairs of the New York & New England road is creating considerable interest just now. As is frequently the case in Connecticut railroad matters, Henry L. Goodwin, of East Hartford, is the central figure in this performance. Goodwin's fingers itch for the account books of our great railroad companies, and, at last, he is in a fair way to turn over all the accounts of the New England Company. He is a stockholder in the Connecticut Central, which the New England operates under lease. There is a clause in the lease that permits a committee of Connecticut Central stockholders, if duly empowered by vote, to examine the books of the New England road. The recent annual meeting of the Central road got together a rather sour crowd, since each had to pay fare to and from the meeting. Somebody, who was specially aggrieved at this bit of expense, got up and moved a committee on the New England road's books. The meeting passed the vote and Goodwin was made Chairman of the committee. He has, at last, caught his elephant, and now the question is as to what he will do with it, and what it will do with him. Nobody charges any crooked accounting against the New England road and there is no specific matter to be followed up, like the old consulars in the figures of the Consolidated road, but the picture of Goodwin in command of a railroad company, calling for its books, and putting the whole concern into quarantine until he is prepared to give it a clean bill of health, presents him in such a triumphant attitude that people wonder, if he pushes hard enough, whether he may not accomplish everything he undertakes."

New York, New Haven & Hartford.—At a special meeting in New Haven, Conn., Nov. 25, the stockholders voted to approve the lease of the Boston & New York Air Line for 99 years, from Aug. 1, 1883, the rental to be (as heretofore stated) interest on the debt and 4 per cent. on the preferred stock. Mr. Goodwin, of East Hartford, who is usually a prominent figure at this company's meetings, made a speech against ratification, but the lease was approved by a vote of 76,837 to 40 shares.

New York, West Shore & Buffalo.—The excavation of the West Point tunnel was completed Nov. 24, and the brick arching was finished on the following day. This tunnel passes under the government grounds at West Point and is the longest and most difficult tunnel on the line.

The Buffalo Express, of Nov. 27, says: "The New York, West Shore & Buffalo road is now under contract from Weehawken to Lake Erie. Erie County has been the last portion of the line to place under contract, but on Saturday it was let to Peterson, Beckwith & Co., the well-known contracting firm of Little Falls. The contract extends from this city to the Genesee County line, and in the vicinity of Clarence includes some very heavy work. We understand that work on the line in Erie County is to begin at once. With such unfavorable weather as the present, however, there is little likelihood of much being done here until spring.

Norfolk & Western.—This company makes the following statement for October and the ten months ending Oct. 31:

Earnings.....October.....Ten months.....
Expenses.....119,688.....1,066,126

Net earnings.....\$152,630.....\$877,621
Per cent. of expenses.....43.9.....54.9

Expenses include estimated proportion of yearly taxes. For the ten months there was an increase of \$111,152, or 6.1 per cent., in expenses; an increase of \$121,664, or 12.9 per cent., in expenses; and a decrease of \$10,512, or 1.2 per cent., in net earnings.

North Carolina Midland.—At the annual meeting in Winston, N. C., the stockholders voted to approve and ratify the contract with the Virginia Midland Company. Under this contract the road is to be completed from Danville, Va., to Mooreville, N. C., on the Atlantic, Tennessee & Ohio road, within three years, and the Virginia Midland is to lease and operate the road when completed, paying a fixed rental of \$120,000 a year. The North Carolina Midland Company is to issue \$2,000,000 first-mortgage bonds, the principal and interest of which will be guaranteed by the lessee.

The completion of the road will give the Richmond & Danville Company (which controls the Virginia Midland) a second line from Danville to Charlotte, parallel to, but generally some distance west of, its present line. The new road will run through a good country, and will probably have a very fair local business.

Northern Pacific.—It is stated that the Land Department has completed a sale of 3,000,000 acres from the land grant east of the Missouri River. The purchasers are a syndicate of English capitalists, who are represented by

Lee, Higginson & Co., of Boston. The price is \$4 per acre, and payment will be made in preferred stock, 120,000 shares of which will be retired by this transaction.

Northern Central.—This company's statement for October and the ten months ending Oct. 31 is as follows:

Earnings.....October.....Ten months.....
Working expenses.....286,286.....2,745,919
Extraordinary expenses.....57,825.....278,644

Total expenses.....\$344,111.....\$3,024,563

Net earnings.....\$206,113.....\$1,946,939

For October the increase in net earnings was 158.6 per cent. For the ten months there was an increase of \$491,586, or 10.9 per cent., in gross earnings; a decrease of \$127,546, or 4.1 per cent., in expenses, and an increase of \$619,131, or 46.5 per cent., in net earnings.

North & South Shore, of Staten Island.—Ground has been broken on this road, which is to run from Port Richmond, on the north shore of Staten Island, across the island to Eltingville and Prince's Bay. It will be about 10 miles long, and will open up a section of the island which has a considerable farming population, but will be entirely new ground to outsiders.

It is a singular fact that, although Staten Island is in large part a singularly beautiful and picturesque region, and can be reached in a half-hour's sail from New York, the interior of the island is an unknown region to New Yorkers, who are, as a rule, far more familiar with the Catskill Region or Lake Champlain than with this island which lies at their doors. With the exception of a narrow strip along the north and east shores of the island, it is occupied entirely by farmers in the interior and fishermen along the south shore.

Old Colony.—At the annual meeting, Nov. 28, the stockholders voted to authorize the issue of \$500,000 new bonds or notes, the proceeds to be used in payment of floating debt and in making improvements on the road.

Omaha & Southwestern.—This company has been organized to build a railroad from the Kansas State line in Washington County southwesterly to connect with the Atchison, Topeka & Santa Fe. The length of the road is 80 miles; capital stock, \$3,600,000.

Oregon Railway and Navigation Co.—It is announced that the dividend on Oregon Navigation stock will be increased to 10 per cent. per year after Nov. 1, and that a privilege to subscribe for new stock at par will be given. A circular has been sent to the stockholders asking for proxies, and calling their attention to the special meeting to be held at Portland, Oregon, on Dec. 9, for the purpose of increasing the capital stock of the company by a further issue of \$6,000,000. The resolution which it is proposed to offer at the meeting will provide that the 60,000 additional shares be offered for subscription, at par, to stockholders of the company of record Dec. 19, 1882, and their assigns, in proportion to their respective holdings of stock. That all rights of subscription not availed of on Dec. 31, 1882, shall be disposed of as the board of directors shall direct. That said subscriptions shall be payable at the offices of the company where the same shall be severally made, on the following days and in the following amounts, namely: Jan. 6, 1883, 20 per cent.; March 1, 1883, 20 per cent.; May 1, 1883, 20 per cent.; July 2, 1883, 20 per cent.; Sept. 1, 1883, 20 per cent. And that stock appertaining to said subscriptions be delivered on and after Sept. 1, 1883, upon payment of all the instalments thereon.

Pennsylvania.—This company's North & West Branch line was formally opened for business last week. It extends from Catawissa, Pa., to Wilkesbarre, 46 miles, connecting at Wilkesbarre with the Lehigh Valley road, and at Catawissa with the Philadelphia & Erie Division. It runs along the south side of the Susquehanna, parallel to the Bloomsburg Division of the Delaware, Lackawanna & Western, which is on the opposite side of the river. Its object apparently is to make a direct connection with the Lehigh Valley road for west-bound coal business.

Pensacola & Atlantic.—Trains are now running from the Apalachicola River west to Marianna, Fla., 25 miles. Work is in progress on the bridge over the Apalachicola, but it can hardly be finished for two months yet. Meantime, connection is made by ferry-boat. It is expected that the track will all be laid by the end of the year.

Philadelphia & Reading.—This company has just completed a stone-arch bridge over Wissahickon Creek in Philadelphia. It is 493 ft. long, having five arches of 65 ft. span and four smaller arches, and is 80 ft. above the water. The bridge is 28 ft. 4 in. wide. The improvement, of which this is a part, straightens the track, taking out an awkward curve by which the old bridge was approached.

Pittsburgh, Chartiers & Youghiogheny.—This road is now completed from the Pittsburgh & Lake Erie road at Chartiers, Pa., south by east 13 miles to the mines of the Chartiers Block Coal Company on Painter's Run. Regular passenger trains have been put on. This is chiefly a coal road, and must not be confounded with the Pittsburgh, McKeesport & Youghiogheny, which is the Vanderbilt line into the coke regions.

Richmond & Allegheny.—Surveys have been made for a branch from Buchanan, Va., to the mines on the Arcadia iron estate. The road will be four miles long.

Rochester & Pittsburgh.—Notice is given that this company will issue consolidated mortgage bonds bearing 6 per cent. interest and having 40 years to run, in exchange for the present income bonds, at the rate of one \$1,000 consolidated bond for two \$1,000 income bonds, provided holders of three-fourths of the income bonds consent to the exchange. It is also announced that the proposed issue of first-mortgage bonds on the Buffalo Division will not be made, the consolidated bonds being substituted.

Sauk Centre Southern.—This company has been organized to build a railroad from Sauk Centre, Minn., southward to the Iowa line, about 160 miles.

Sauk Centre Northern.—Track on this road is now laid for 26 miles northward from Sauk Centre, Minn., and grading is finished for 15 miles further. The road is controlled by the St. Paul, Minneapolis & Manitoba Company, and runs up into the hard-wood lumber region of Northern Minnesota.

Texas & St. Louis.—The St. Louis Republican says that the progress made is such as to leave little doubt that this road will be completed across Arkansas this year. Including the 26 miles of the Little River Valley & Arkansas road bought, there are 140 miles in operation on the northern end. The part in Missouri extends between New Madrid and Malden and receives one to three car-loads of cotton daily, 40 to 45 bales being taken on flat cars and a little less in box cars. The most difficult work remaining is the completion of the bridges over the St. Francis, the White, the Arkansas and the Ouachita rivers. The bridge over the Arkansas will be the largest structure of the kind south of

St. Louis. The draw span, 850 ft. in length, will be entirely of iron, and the remaining spans will be combination resting on iron piers, which have been sunk 65 ft. below the river-bed. The total length of this bridge will be about 1,700 ft. It will be finished before the end of next month, according to the statement of the builders; and the bridges over the other rivers mentioned will also be in order at that time.

The closing of the gap in Arkansas will give an unbroken or through line between Bird's Point, opposite Cairo, Ill., and Gatesville, Tex., via Waco, a distance of 752 miles.

The earnings of the Texas Division, which has been in operation about two years, are reported to have been \$79,494 from Oct. 1 to Nov. 14, and about \$50,000 more than last year. In October 17,750 bales of cotton were carried, nearly all of which went to Galveston.

Tionesta & Clarion.—It is stated that work will soon be begun on this road, which is to run from Eagle Rock, Pa., on the Buffalo, Pittsburgh & Western road, south by east to New Bethlehem in Clarion County, about 40 miles. The road will run through a heavily timbered region, and will reach some large coal deposits.

Toledo & Milwaukee.—Work has been begun on this road near Marshall, Mich., and much of the right of way has been secured.

The Marshall Statesman says: "The contracts for the entire line have been let in tracts of 11 miles or thereabouts. Negotiations are in progress for the use of the Toledo & Ann Arbor road, running from Toledo to Dundee, which, if secured, will obviate building that part; but if no bargain can be made a new road will be built. S. B. Wakefield, Monroe, Mich., has the first 11 miles west of Dundee. Mat Spellacy, Conneaut, O., the next 11 miles west, bringing it seven miles west of Tecumseh. A. F. Wilcox, Silver Creek, N. Y., next 11 miles. Norton & Hoffman, Cleveland, O., the next 11 miles. George T. Meily, Lima, O., the next 11 miles. Z. A. Hakes, Chicago, has the next eight miles, beginning two miles west of Homer and running two miles east of Marshall. J. H. McLane, Coldwater, next 12 miles, beginning two miles east of Marshall and running to Beadle Lake. From Beadle Lake the old grade of the Mansfield & Coldwater railroad will be used to Monteith. From Monteith to Allegan, the road now in operation has been purchased for \$178,000. The timber contracts for bridges and culverts have been let in two contracts. Thomas A. Hamilton, of Toledo, has from Monteith to Homer, and Decree & Eckerman have from Homer to Dundee."

Toledo & South Haven.—This road is now completed to Hartford, Mich., on the Chicago & West Michigan road eight miles west of the old terminus at Lawrence and 21 miles from the eastern terminus at Lawton.

Topeka, Salina & Western.—The Massachusetts Supreme Court, in the suit brought by the Kansas City & Eastern Construction Company to restrain this company from making a contract with C. G. Patterson and others to build the road, has sustained a demurrer filed by the company and dismissed the suit.

Union Pacific.—This company recently issued a circular announcing that the Oregon Short Line was now open for business from Granger to American Falls, and ordering that all freight from Montana and Idaho, reached by the Utah and Northern, be shipped over that route. All freight going north of the crossing of the road, at McCannan Junction, will be transferred there from the broad gauge to the narrow gauge road, and all freight to Wood River will either go to American Falls or Blackfoot. Rates are to remain the same as if going via Ogden.

The distance from Granger, Wyoming, to Baker City, Oregon, by the Oregon Short Line, will be 586 miles, if the present surveyed route is used.

West Jersey.—The gross earnings of all the lines worked by this company, in October, were \$83,163.95; expenses, \$55,100.47, leaving the net earnings \$28,063.48. The net income of the lines of the West Jersey proper, after the payment of all obligations for October, was \$14,234.35, and the net income for ten months ending Oct. 31 was \$191,688.83, being a gain, as compared with the corresponding period of last year, of \$39,500. The net earnings of the West Jersey & Atlantic (which are paid to that company as rental) were \$62,614.18, being an increase, as compared with the ten months of last year, of \$6,900.

Wabash, St. Louis & Pacific.—A dispatch from Boston, Nov. 26, says: "It has been rumored for some time in financial circles here that a large amount of paper bearing the signatures of Jay Gould, Russell Sage, and Sidney Dillon is afloat on the market, and can be had at 6½ or 7 per cent. The President of one of the largest banks in this city says that a few days ago he was offered notes signed by Gould, Sage, and Dillon in denominations of \$10,000 each at 6½ per cent., with an intimation that he could have them at 7 per cent. He declined to invest in the paper of the speculators, on the ground that if a man like Jay Gould wanted money his name was not a safe one to accept as security. A prominent note broker said that the whole issue had been taken by Blake Brothers & Co., No. 18 Wall street, New York, who have also a house in this city. Blake Brothers, he said, have disposed of the entire lot, mostly to people in this city. He could not say how large the issue was, but the notes were for \$10,000 each, and the aggregate footed up a large amount. They were issued, according to the broker's information, to aid the Wabash, St. Louis & Pacific Company, which was in need of money and was unable to raise it. In this emergency Gould, Sage, and Dillon came to the rescue, and secured the necessary money on their own notes, presumably taking security for the loan from the company."

THE SCRAP HEAP.

Light Draught Steamer for Nicaragua.

At a recent meeting of the Engineers' Club of Philadelphia, Mr. Chas. W. Pusey presented a paper upon the twin screw steamer "Victoria." On Tuesday, Nov. 7, this steamer sailed from Wilmington, Del., for Greytown, Nicaragua. This vessel is a light draught, twin screw steamer for service on Lake Nicaragua, and of a class that is attracting some attention from those interested in the economical transportation of freight on bays and rivers, where the draught of water is limited, and where the side wheel steamer is principally used.

The hull is of iron and is 136 ft. 6 in. length over all, 26 ft. beam and 7 ft. deep above cross-frames. The model is the same as that of several side wheel steamers built for service on rivers and bays in South America and Mexico. She has one fore and aft bulkhead in centre, and four athwartship, all made water tight. The compartment aft is fitted for water ballast to trim the vessel. The frame is of angle iron. The machinery consists of two compound engines with cylinders 12 in. and 21 in. diam. by 18 in. stroke, fitted with jet condensers. The engines are independent, each driving a propeller wheel 6 ft. diameter. She has two steel boilers of the locomotive type, fitted for burning wood and constructed for a working pressure of 100 lbs. per square inch. The

finished draught of water with 5 tons of coal in bunker, was 4 ft. 6 in. aft, and 3 ft. 6 in. forward. On trial trip with a draught of 5 ft. 4 in. aft and 2 ft. 10 in. forward, she made a speed of 10 knots per hour, with 119 revolutions per minute, 94 lbs. pressure and 26 in. vacuum; total indicated horse power 246. During the trial the ballast tank was filled with water.

When she sailed for Greytown she had a cargo of 105 tons of coal, also merchandise and stoves amounting to about 20 tons more, the draught of water being 6 ft. 3 in. aft and 5 ft. forward. Under these conditions going down the bay, she made 9½ knots per hour, with 80 lbs. steam pressure and 108 revolutions per minute.

Tramps.

Tramps are troubling the conductors on the railways leading out of this city, by stealing rides. The other night on one train six were ditched between Raleigh and Cary. One of the conductors on the Raleigh & Augusta road found that in an empty box car were no less than fifteen tramps, all asleep and snoring loudly. He locked the door of the car and when he reached Hamlet they begged to be allowed to get out, saying they wished to go to Charlotte, that some were sick and one had a fit. But their racket didn't work, their car was attached to the Wilmington train, and they were shipped as live stock, east instead of west.—*Raleigh N. C. News and Observer.*

ANNUAL REPORTS.

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New York, Lake Erie & Western.

The report of this company for the year ending Sept. 30 contains the following statements of its property, in the report of Vice-President Robert Harris:

"The track from Suffern to Piermont and from Bergen to Nyack was narrowed to standard gauge June 24, so that locomotives and cars of standard gauge can traverse all parts of the road and branches.

"The outer rail has not been removed from any part of the road this year, but in a few months we shall have enough engines of the standard gauge to allow the removal of the third rail from one of the three divisions between Jersey City and Herculinesville.

"Total length of road, including branches and leased roads, Sept. 30, 1882, 1,060.592 miles, of which 433.401 miles, viz.: between Jersey City and Buffalo, including Bergen County loop line, are double track, and 627.191 miles are single track.

"At the beginning of the year there were on hand 544 locomotives, of which 326 were broad gauge and 218 standard gauge.

"Built in the year in company's shops, 15; condemned and torn down, 21; leased of Car Trust of New York, No. 2, 25; acquired with Middletown & Crawford road, 1; leaving on hand at the end of the year 564, of which 259 are broad gauge and 305 standard gauge.

"Number of locomotives narrowed to standard gauge in the year is 45.

"The work of narrowing the locomotives is being carried on in the company's shops at the rate of about five per month."

| NUMBER OF CARS ON THE ROAD, SEPT. 30. | | | |
|---------------------------------------|-----------|--------|--------|
| | Standard. | Broad. | Total. |
| First-class passenger..... | 250 | 250 | 250 |
| Second-class and emigrant..... | 79 | 79 | 79 |
| Inspection..... | 3 | 3 | 3 |
| Pay..... | 2 | 2 | 2 |
| Baggage, express and mail..... | 106 | 106 | 106 |
| Milk..... | 39 | 39 | 39 |
| Box freight..... | 13,907 | 13,907 | 13,907 |
| Box stock..... | 481 | 481 | 481 |
| Slat stock..... | 1,184 | 1,184 | 1,184 |
| Oil tank..... | 251 | 251 | 251 |
| Flat..... | 1,132 | 1,132 | 1,132 |
| Gondola..... | 1,866 | 1,866 | 1,866 |
| Gondola dump..... | 6,362 | 6,362 | 6,362 |
| Gondola drop bottom..... | 988 | 988 | 988 |
| Coal—8-wheel..... | 2,103 | 2,103 | 2,103 |
| Coal—4-wheel..... | 74 | 108 | 272 |
| Caboose—8-wheel..... | 50 | 50 | 50 |
| Caboose—4-wheel..... | 184 | 184 | 184 |
| Gravel..... | 40 | 40 | 40 |
| Derrick and tool..... | 32 | 32 | 32 |
| Total..... | 29,123 | 198 | 29,321 |

The line from Bradford to Johnsonburg, 30 miles (referred to elsewhere), was opened Oct. 1, and coal trains are now running over it.

Extensive improvements have been made at the coal and oil docks and stock-yards at Weehawken.

The total expenditure on improvements of road and equipment during the year was \$2,716,080.51.

The general balance sheet is as follows:

| LIABILITIES. | | | |
|--|------------------|----------------|--------------|
| | 1881. | 1882. | Inc. or Dec. |
| Common stock..... | \$77,087,600.00 | \$144,500.00 | |
| Preferred stock..... | 7,987,500.00 | 355,300.00 | |
| Funded debt..... | 70,267,137.65 | 3,101,471.70 | |
| Loans payable..... | 650,000.00 | 350,000.00 | |
| Interest due and accrued..... | 45,500.00 | \$9,000.00 | |
| Preferred stock, dividend..... | 1,157,874.55 | 48,343.85 | |
| Rentals of leased lines, etc..... | 4,380.00 | 4,380.00 | |
| Amounts due on current account: | | | |
| Pay-rolls for September..... | 684,825.66 | 24,505.86 | |
| Audited vouchers for supplies, etc., including September vouchers..... | 1,652,440.92 | 104,361.73 | |
| Traffic balances, etc..... | 598,066.33 | 46,014.06 | |
| Assessments on the common stock..... | 130,479.47 | 3,154.03 | |
| Assessments on the preferred stock..... | 2,791,224.00 | 200.00 | |
| Interest on assessments, interest and profits on investments, exchange, etc..... | 116,490.00 | 100.00 | |
| Advances to construct N. Y. L. E. & W. Coal & R. R. and other improvements..... | \$2,236,666.66 | 540.12 | |
| Less expended..... | \$1,612,537.48 | | |
| Profit and loss..... | 624,129.18 | 624,129.18 | |
| Total..... | \$170,989,814.15 | \$5,408,102.17 | \$90,250.16 |
| ASSETS. | | | |
| | 1881. | 1882. | Inc. or Dec. |
| Construction—main line..... | \$3,200,819.52 | \$950,161.97 | |
| Third rail—general account..... | 217,036.70 | | |
| Equipment..... | 1,184,441.59 | 418,370.75 | \$1,861.50 |
| Real estate..... | 441,306.64 | 56,918.27 | |
| Amounts expended out of special fund for: | | | |
| Third rail..... | 1,207,429.20 | | |
| Second track..... | 1,067,141.14 | 87.50 | |
| Grading..... | 2,942.40 | | |
| Real estate..... | 14,716.00 | 8,580.60 | |
| Right of way..... | 2,250.00 | | |
| Improvements at Buffalo..... | 141,504.60 | | |
| Engine-house at Bergen..... | 36,556.59 | | |
| Equipment..... | 396,316.00 | | |
| Elevator at Buffalo..... | 203,973.16 | | |
| Ship basin and docks, Jersey City..... | 98,938.55 | | |
| Erie International Railroad..... | 2,683.50 | | |
| Miscellaneous..... | 29,969.99 | | |
| Construction of branch lines..... | 398,863.20 | 141,832.61 | |
| Elevator at Buffalo..... | 7,394.00 | | |
| Ship Basin and Docks, Jersey City..... | 115,600.22 | 3,564.45 | |
| Lehigh Docks—Buffalo..... | 126,713.72 | | |
| Weehawken Docks—Construction..... | 37,113.11 | 9,222.91 | |
| Blake's Docks—Buffalo..... | 134,545.09 | 44,679.11 | |
| New York & Fort Lee Railway..... | 25,346.45 | | |
| Improvements at Union Stock Yards, New York City..... | 31,565.92 | 23,267.49 | |
| Buffalo & Southwestern..... | | 52,205.20 | |
| Flagg's railway gate..... | 3,500.00 | 3,500.00 | |
| Amounts paid on account of Equipment..... | 2,602,501.29 | 934,649.41 | |
| Stocks of other companies..... | 3,269,107.16 | 2,534,616.67 | |
| Bonds of other companies..... | 273,819.60 | | |
| Amounts due on current accounts..... | 3,158,479.00 | 503,063.50 | |
| Materials and supplies..... | 976,094.84 | 230,086.23 | |
| Cash on hand..... | 508,617.53 | 431,467.21 | |
| Cash in London to pay coupons..... | 14,126.33 | 9,587.00 | |
| Bills receivable..... | 34,666.69 | | |
| Discount on common stock..... | 269,675.00 | | |
| Discount on bonds..... | 29,788.16 | 29,788.16 | |
| Estate of Erie Railway Co..... | 150,629,734.71 | 581,195.92 | |
| Totals..... | \$170,989,814.15 | \$6,183,788.01 | \$874,938.00 |
| Net increase..... | | \$5,308,852.01 | |

The President's report says of the stock:

"Of the \$85,240,525 of stock of the Erie Railway Company upon which assessments were paid, there has been issued in exchange therefor to Sept. 30, 1882, the stock of this company as follows, viz.:

| | |
|----------------------|--------------|
| Common stock..... | \$76,587,000 |
| Preferred stock..... | 7,987,500 |
| Total..... | \$84,574,500 |

Still held awaiting such exchange:

| | |
|----------------------|-----------|
| Common stock..... | \$490,200 |
| Preferred stock..... | 169,225 |
| Total..... | 659,425 |

Total.....\$85,240,525

The total amount of capital stock issued to Sept. 30, 1882, is as follows:

| | |
|--|--------------|
| Amount exchanged as above..... | \$84,574,500 |
| Common stock sold as per last report (5,000 shares)..... | 500,000 |
| Total..... | \$85,074,500 |

Amount of assessed stock not exchanged.....665,425

Amount on hand subject to sale:

| | | |
|----------------------|---------------|--------------|
| Common stock..... | 4,162 shares. | 790,375 |
| Preferred stock..... | 3,801½ " | |
| Total..... | | \$86,530,900 |

The statement of train mileage is as follows:

| | 1881. | 1882. | Inc. or Dec. | P. c. |
|----------------|------------|------------|--------------|-------|
| Passenger..... | 3,476,629 | 3,546,055 | I. 69,426 | 2 |
| Freight..... | 9,112,086 | 8,569,938 | D. 542,148 | 5.9 |
| Switching..... | 2,964,334 | 2,857,670 | D. 106,664 | 3.6 |
| Other..... | 352,233 | 318,734 | D. 33,499 | 9.5 |
| Total..... | 15,905,282 | 15,292,397 | D. 612,885 | 3 |

The following is the general statement of traffic, with averages of haul and load:

| Description. | 1881. | 1882. | Inc. or Dec. | P. c. |
|-------------------------|---------------|---------------|---------------|-------|
| No. of pass..... | 6,144,158 | 6,784,105 | I. 640,037 | 10 |
| Pass-miles..... | 200,483,790 | 225,130,883 | I. 24,647,093 | 12 |
| Tons gen. fr't..... | 5,567,973 | 5,790,506 | I. 222,533 | 4 |
| Tons coal..... | 5,518,850 | 6,104,672 | I. 585,822 | 10 |
| Ton-mile gen. fr't..... | 1,409,861,618 | 1,343,313,585 | D. 66,548,033 | 4 |
| Coal ton-miles..... | 574,533,237 | 611,076,125 | I. 36,542,888 | 6 |
| Total tons fr't..... | 11,086,823 | 11,895,238 | I. 808,415 | 7 |
| Total ton-miles..... | 1,984,394,855 | 1,954,389,710 | D. 30,005,145 | 1 |

| Averages: | 1881. | 1882. | Inc. or Dec. | P. c. |
|-----------------------------|-------|-------|--------------|-------|
| Tons freight per train..... | 218 | 228 | I. 10 | 4 |
| Miles hauled..... | 179 | 164 | D. 15 | 8 |
| Passengers per train..... | 58 | 63 | I. 5 | 8 |
| Miles hauled..... | 33 | 33 | | |

The coal and other supplies transported for the company's own use amounted to \$68,710 tons, thus swelling the aggregate tonnage for the year 1882 to 12,763,948 tons.

The earnings and expenses per train mile and per unit of traffic were as follows:

| | 1881. | 1882. | Inc. or Dec. | P. c. |
|--|--------|--------|--------------|-------|
| Earnings per freight train mile..... | \$1.75 | \$1.71 | D. 0.04 | 2.3 |
| Expenses "..... | 1.15 | 1.20 | I. 0.05 | 4.3 |
| Net earnings per "..... | .60 | .51 | D. 0.09 | 15 |
| Earnings per passenger train mile..... | 1.32 | 1.41 | I. 0.09 | 1.8 |
| Expenses "..... | .79 | .79 | | |
| Net earnings per "..... | .53 | .62 | I. 0.09 | 17 |

| | 1881. | 1882. | Inc. or Dec. | P. c. |
|---|-------|-------|--------------|-------|
| Earns. per ton per mile, merchandise freight..... | .789 | .722 | D. .067 | 8.5 |
| Earn. per ton per mile, coal freight..... | .845 | .808 | D. .037 | 4.5 |
| Earn. " " all freight..... | .805 | .749 | D. .056 | 7 |
| Expenses per "..... | .328 | .328 | | |
| Net earn. per ton per mile, all freight..... | .477 | .480 | I. .003 | 0.6 |
| Earn. per passenger per mile..... | 2.016 | 1.947 | D. .069 | 3.4 |
| Expenses per "..... | 1.372 | 1.245 | D. .127 | 9.3 |
| Net earn. "..... | .644 | .702 | I. .058 | 9 |

The earnings for the year were as follows:

| | 1881. | 1882. | Inc. or Dec. | P |
|--|-------|-------|--------------|---|
|--|-------|-------|--------------|---|

the second-consolidated mortgage, provide for the creation and disposition of re-organization first lien bonds to the amount of \$2,500,000 for certain purposes therein named.

In pursuance of this authority, these bonds, amounting to \$2,500,000, have been disposed of during the year, and the proceeds thereof have been used for the purpose for which said bonds were created.

3. During the year, holders of \$11,000 of first-consolidated mortgage bonds have assented to the plan of re-organization, as they were entitled to do, which has involved the issue for the coupons thereof of first-consolidated funded coupon bonds to the amount of \$2,471.70.

4. During the same period, one second-mortgage bond has been purchased and cancelled, amounting to \$1,000. This bond was so much defaced that it could not be negotiated.

The total amount, therefore, of the funded debt on Sept. 30, 1882, was \$70,267,137.65.

The amount of the first consolidated mortgage bonds, at present unassented, is \$169,000.

EXTENSION OF THE THIRD MORTGAGE.

This mortgage will mature March 1, 1883. The bonds outstanding secured by it amount to \$4,852,000, bearing interest at the rate of 7 per cent. per annum. Arrangements have been made for the extension of these bonds from the date of their maturity, for a term of 40 years, at the rate of 4½ per cent. per annum.

This reduced rate of interest will make an annual saving in the interest account of \$121,300, which, together with the reduction made in the rate of interest on the extension of the fourth mortgage, amounting to \$58,740 per annum, and the reduction made in the rate of interest on the second mortgage amounting to \$43,480 per annum, makes a total saving of \$223,520 per annum.

Your board believe that they will be able to extend the outstanding mortgages as they mature, at reduced rates of interest, corresponding with the reductions already made as above, and thus effect such a reduction of the fixed charges as will enable the company, at no very distant day, to provide for quarterly or semi-annual dividends on its preferred stock, if the law will permit, and also to make some provision for its common stock.

ASSESSMENT FUND.

The balance of the Assessment Fund remaining on hand, and unexpended, Sept. 30, 1881, as per last report, was..... \$14,017.33

Add interest on investments..... 540.12

\$14,557.45

Less amount returned to a preferred stockholder, who had paid the assessment on common stock, in error..... 100.00

\$14,457.45

Of this sum there has been applied to improvements..... \$8,670.50

Leaving a balance Sept. 30, 1882, in hands of the Trustees in London..... \$5,338.09

In hands of Treasurer..... 442.89

5,780.95

Total..... \$14,457.45

REMARKS.

Until within the last two years the efforts of your board have been directed almost solely to the improvement of the road, its equipment, its terminal and other facilities, so that not only the traffic then offering, but a largely increased business might be done with the greatest facility and the highest degree of economy.

Having made great progress in this direction, as the reports and results from year to year evidence, your board turned its attention to the development of local interests and properties along its line, as well as to the securing by roads under its control independent access to the great trade centres of the West. Hence the contracts and acquisitions hereafter specifically named.

THE BRADFORD BRANCH EXTENSION.

The Erie Railway Company, many years since, became the owner, in fee, of a large body of coal lands situated in the counties of Jefferson, Elk and McKean in the state of Pennsylvania, and also the owner of the mineral rights of about an equal number of acres, in all about 36,000 acres, all of which lands are heavily timbered, the product of which, when prepared for market, can be readily sold at a profit, as well as to furnish to the railroad a very heavy tonnage for transportation.

These lands lie distant from the Bradford Branch road an average of some 50 miles or more. The company could not avail itself to any great extent of the advantage afforded by these properties for fuel purposes, or of their products for sale or transportation to market, unless its road was extended to and through such properties. The board, therefore, after mature consideration, determined to extend the Bradford Branch road down into these coal fields, and in making provision for such extension, to make, if possible, such contracts or arrangements with the Pennsylvania Railroad Company as would secure for a connection of such extension with the Allegheny Valley (or Low Grade) road, and thereby form a line connecting our system of roads with the city of Pittsburgh and the roads tributary thereto. Believing that a very large and profitable traffic could be built up in the event of such connections, negotiations to these ends were at once entered upon.

A most satisfactory contract has been made with the Pennsylvania Railroad Company for the construction of a road connecting Johnsonburg, the end of our extension of the Bradford Branch, with Falls Creek, on their Allegheny Valley (Low Grade) road; connecting also at Brockwayville with our branch line into the mines.

Under these arrangements we have completed the road to Johnsonburg and are now operating it, bringing from our mines a large amount of coal daily. The extension to Falls Creek and the branch into the mines we expect will be completed early in the coming season.

The character of the coal taken from these properties proves to be of the very best, both in the form of coal or coke.

That these properties will now be made to contribute largely to the interests of this company your board has no doubt; and that a very large traffic from Pittsburgh will grow up we have every reason to believe.

LEHIGH VALLEY RAILROAD.

The Lehigh Valley Railroad connects with our road at Waverly, 167 miles east of Buffalo.

It is one of the largest coal-producing companies in the country, and also has control of a very large miscellaneous business. It had diverse connections independent of our road, and had, for some years, done its business with such as from time to time offered to do it the greatest advantages. It was considering the propriety of extending its own road to Buffalo, when negotiations for concentrating its business on our road for all points west of Waverly were commenced.

The result of these negotiations was the making of a contract, on May 1, 1882, to continue 10 years, and thereafter until one year's notice is given of a desire to terminate it, for giving to this company at Waverly, for all points west thereof, its entire traffic, coal and miscellaneous upon terms and conditions just and satisfactory, as your board believes, to both companies, and of great value to your company.

ERIE & WYOMING VALLEY RAILROAD.

About the time of the purchase of the bituminous coal lands in Jefferson, Elk and McKean counties, Pennsylvania, to which reference has already been made, the Erie Railway Company also acquired considerable interest in the anthracite coal lands located in the Wyoming Valley of Pennsylvania. It had previously leased what is known as the Jefferson Railroad, running from Susquehanna, on our main line, to Carbondale, Pennsylvania, a distance of 34½ miles.

In the neighborhood of the coal lands thus acquired there are very extensive mines, producing annually many million tons of coal. To reach these mines and to secure the transportation of such product westward, we had to take our cars from Jersey City to Susquehanna and thence down the Jefferson Railroad to Carbondale, at which point we were forced to rely entirely upon other companies for their proper distribution to the various collieries. After they were loaded they had to return over the Jefferson road to Susquehanna for transportation west. By reason of these and many other difficulties, we were substantially cut off from a very large westward coal business, which we might otherwise have controlled.

In the case of coal traffic eastward bound from the Wyoming Valley, our principal trade was from the Delaware and Hudson Canal Company and the Pennsylvania Coal Company, by way of their gravity roads over the mountains, and was delivered to us either at Honesdale or Hawley—a somewhat expensive operation, involving much delay from transfers.

To avoid these difficulties, expenses and delays, your board some time since entered upon negotiations with the Pennsylvania Coal Company for the use of their lines and planes over the mountains, for a standard gauge road by which we could run our cars direct to their collieries, and to those of other companies. These negotiations have resulted in a contract by which all these purposes will be accomplished and by which we will secure, east and west, the entire product of the collieries of the Pennsylvania Coal Company as they exist, or may hereafter exist, and by which we can, without doubt, secure the transportation of a large amount of other coal from the same region, hoping that the Delaware and Hudson Canal Company will see their way clear to unite in a similar contract.

The saving in the expense of handling empty cars in their mileage (about 100 miles), and in the time of getting them west will in itself contribute largely to defraying any burdens we may have to assume in the construction of this road. We hope to avoid the necessity of building the road the entire distance to Carbondale; but, if necessary to make the connection complete, it will be built. We hope, however, to make satisfactory arrangements with some one of the many roads running in that direction.

THE BLOSSBURG COAL COMPANY.

This company proper was represented by a capital of \$1,000,000; but subsequent to its organization, in addition to its own property, it had acquired largely of the property of other coal and railroad companies.

The property of the company is situated in the state of Pennsylvania, about 50 miles south of the New York, Lake Erie & Western Railroad, connected therewith at Elmira by its own road, and at Corning by 30 miles of its own road, in connection with 15 miles over which it has trackage rights.

After considerable negotiation, the stock of this company was purchased for \$2,000,000. Of this amount \$1,285,000 was paid in cash and the Grand Opera-house property, which your Company had so long owned, was put in at a valuation of \$715,000.

By this purchase we secure the ownership and control of about 66 miles of railroad, and of about 28,000 acres of coal lands, which are fully developed and producing about 400,000 tons annually, together with two hundred coke ovens, producing about 60,000 tons of coke per annum. The land is heavily timbered, and had on it two large saw-mills, equal in capacity to about nine millions of feet of sawed lumber per year. Since the acquisition of the property another mill has been completed equal in capacity to both of the others.

The property in the past has been producing a very large profit upon the investment, and may be made still more productive, especially in the hands of your company. The great object, however, in view in this negotiation was to secure the absolute control of this valuable property, and the transportation over your railroad of its products.

This has been done, and the investment will undoubtedly prove a very valuable one.

CHICAGO & ATLANTIC RAILWAY COMPANY.

This is a road projected from Chicago eastwardly to the town of Marion, on the New York, Pennsylvania & Ohio Railroad, a distance of about 269 miles. The country through which it passes is one of the most productive in the states of Ohio, Indiana and Illinois.

The line is a direct one, free from curves and grades. The company entered into a contract with Messrs. Conant & Smith for the construction of the road, agreeing to give them in consideration therefor, the entire proceeds of its mortgage bonds (\$8,500,000) and its entire capital stock (\$10,000,000).

To secure the construction of the road and its future management to the satisfaction of the parties proposing to purchase the bonds, it was agreed that the entire proceeds thereof together with certain subsidies which had been voted by the counties and townships along the line, should be deposited with the President of the New York, Lake Erie & Western Railroad Company, in trust, and the duty was devolved upon him of seeing to the proper application thereof to the construction of the road. It was further stipulated that 90 per centum of the stock should also be deposited with him, with the irrevocable proxy to vote thereon during the life of the bonds (thirty years from the date thereof), thereby securing to your company the absolute control of the road for such period. The contract also provided for a traffic arrangement between the Chicago & Atlantic Railway Company, the New York, Pennsylvania & Ohio Company, and your company, and for a representation of the New York, Pennsylvania & Ohio company in the board of the Chicago & Atlantic Company.

Under this arrangement, the road is now near its completion. It has been well and substantially constructed, and will probably be in condition for active business early in the ensuing January. By this means, your company secures access to the business and markets of Chicago by a line of road as much under its control as though it had advanced all the money needed for its construction and assumed all the obligations incident to its maintenance and operation. The only obligations your company has assumed in the contract referred to, are those of seeing that the road is completed out of the proceeds of such bonds and subsidies, or if such proceeds shall not be sufficient, to provide any balance which may be necessary for that purpose, having therefor the first lien upon its surplus earnings after payment of the interest upon its bonds; and joining the New York, Pennsylvania & Ohio Railroad Company in a traffic contract, by which it is agreed that if the Chicago & Atlantic Company

fail to pay the interest upon its bonds, then the two first-named companies shall set apart out of the earnings realized by them from the business coming to or going from that road an amount sufficient to make good any deficiency in the payment of such interest.

We have every reason to believe that this road will be one of the most profitable of any constructed in the West. It will be observed that the only liability devolving upon the Chicago & Atlantic Railway is its mortgage debt of \$6,500,000, which is so small in comparison with the liabilities of like lines in the West that the value of the investment in the bonds as well as in the stock cannot well be questioned.

CINCINNATI, HAMILTON & DAYTON.

The Cincinnati, Hamilton & Dayton road proper runs from Cincinnati to Dayton, a distance of 60 miles, traversing for its entire length the Big Miami valley. It is also the lessee of the Dayton & Michigan road, running between Dayton, Toledo and the Lakes. It also controls the Cincinnati, Richmond & Chicago road, connecting Hamilton, on its main line, with Richmond, in the state of Indiana, and also the Cincinnati, Hamilton & Indianapolis road, running from Hamilton to Indianapolis.

By the control of the Cincinnati, Hamilton & Dayton road, we secure independent access to the trade and markets of Cincinnati, Indianapolis, Dayton, Richmond and Toledo.

The number of miles the control which is thus acquired is about 350.

An attempt was made to consolidate these roads with the Cleveland, Columbus, Cincinnati & Indianapolis Railroad, under such circumstances as led your company to fear that it would be embarrassed, if not entirely cut off, from reaching any of the points designated over any of the lines in the Cincinnati, Hamilton & Dayton system; hence such steps as were deemed best were taken to secure, if possible, their control, or at least to prevent their being controlled in interests adverse to those of your company, the result of which was an agreement with the holders of two millions of its stock (that being a majority of the whole), by which the representative of your company became the purchaser of the stock, the parties from whom the purchase was made agreeing to receive beneficial certificates therefor to the amount of \$1,500,000, and your company obligating itself to make good any failure of the Cincinnati Company to pay a semi-annual dividend of 3 per cent. upon the amount of stock thus controlled, the title to the stock and the voting power thereon remaining with your company or its representatives indefinitely.

Your board regard this a very valuable acquisition. They anticipate no loss whatever from the guaranty, but great advantages to be derived from the reasonable and proper exercise of the power thus secured.

The following is but a brief statement of these various contracts. It would be impossible to put them in detail in this report; but in the judgment of your board they are of great value, and will, when in full operation, contribute largely to the revenues of the company, at a comparatively slight expense, and are in the line of the policy long since determined upon, the full benefits of which, however, can be realized only when they are all fully completed.

DIVIDENDS.

By reference to the general profit and loss account it will be noticed that the interest upon the income bonds, and the dividend upon the preferred stock for the year 1881, are entered in the accounts of the year 1882, although they were due and payable on account of the earnings of the year 1881; but not having been declared or ordered paid until after the close of the fiscal year, they were necessarily carried into the accounts of the present year.

The board has this day authorized the payment of the interest on the income bonds and a dividend of 6 per cent. on the preferred stock of the company for the year 1882.

CONCLUSION.

The board takes pleasure in testifying to the efficiency with which the various officers, agents and employes have discharged the duties required of them.

Petersburg.

This company owns a line from Petersburg, Va., to Weldon, N. C., 64 miles. The following report for the year ending Sept. 30 was presented at the recent annual meeting. The stock and debt was as follows:

| | |
|------------------------------|-------------|
| Preferred stock..... | \$223,500 |
| Common stock..... | 1,000,700 |
| Total stock..... | \$1,224,200 |
| Income bonds 4 per cent..... | 160,000 |
| Mortgage debt..... | 1,803,000 |
| Total..... | \$3,287,200 |

The mortgage debt consists of \$400,000 old 8 per cent. first-mortgage bonds; \$3,000 old second-mortgage bonds; \$400,000 new Class A, 5 per cent. bonds and \$1,000,000 new Class B, 6 per cent. bonds. The authorized issue of Class A bonds is \$1,000,000; the unissued balance is to be used to retire all the other debt except the Class B bonds.

The earnings for the year were as follows:

| | 1881-82. | 1880-81. | Inc. or Dec. | P. c. |
|----------------------------|-----------|-----------|--------------|-------|
| Earnings..... | \$238,544 | \$283,257 | I. 12,287 | 4.3 |
| Expenses..... | 159,703 | 189,282 | D. 29,579 | 16.2 |
| Net earnings..... | \$138,841 | \$96,975 | I. 41,866 | 43.2 |
| Gross earn. per mile..... | 4.065 | 4.473 | I. 192 | 4.3 |
| Net "..... | 2.169 | 1.515 | I. 654 | 43.2 |
| Per cent. of expenses..... | 53.49 | 66.12 | D. 12.63 | ... |

There was a small decrease in freight, and an increase in passenger, mail and miscellaneous earnings. The net earnings were sufficient to meet all interest charges and dividends on preferred stock.

The additions to the property of the company consist of an iron bridge across the Nottoway River, costing \$4,970.26; track scales at Petersburg, costing \$1,060.17; 330 tons steel rail, \$16,804.72; stationary engine at shops, \$1,532.85; 5 box and 12 flat cars, \$10,802.58; two passenger cars, \$10,092; one locomotive, \$12,680.50; two wood and tank sheds, \$2,044.64.

President Myer's report says: "With regard to the liabilities of the company, there have been issued 400 Class A 5 per cent. bonds. The whole of the Class B 6 per cent. bonds have been disposed of as directed in your former meeting.

"There are still unredeemed certain coupons of the old first-mortgage bonds, amounting to \$49,000. These coupons may be redeemed at any time within the next four years, either from the proceeds of further sales of Class A bonds or from the surplus revenue of the company. There are still outstanding \$3,000 of the old second-mortgage bonds, upon which, however, the interest has been paid. The coupons were not presented until recently.

"The business of the company suffered, of course, from the interruption of Richmond, due to the destruction of the James River bridge; and the short crops of last year have told upon its receipts. Both of these drawbacks have ceased to operate."